



1900
1901

I need say no more with
this book from 1900 to 1901
1902



F. Pym

REMARKABLE MEN.

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Frontispiece. WATERTON BIRDS'-NESTING AT FLAMBOROUGH HEAD. [See page 200.]

REMARKABLE MEN:

WOTTON.

FERGUSON.

HUMBOLDT.

WILBERFORCE.

FARADAY.

SCOTT.

ARNOLD.

WATERTON.

ROBERTS.

BUNYAN.

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SIR HENRY WOTTON.

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REMARKABLE MEN.



I.

SIR HENRY WOTTON.

SIR HENRY WOTTON was born in 1568, at Bocton Hall, in Kent. He grew up a fine and stately youth, of a thoughtful face and so cheerful and courteous a manner, that men prophesied in him the future ambassador. At the University of Oxford, his wit increased by contact with a large circle of quick-minded friends, of whom Donne was the dearest; and he wrote the play of "Tancredo" for the private acting of the dons and students of Queen's College. Taking his degree of Master of Arts with great honour, he left his books and went abroad to study the great book of the world. There, in France, Germany, and Italy, during nearly nine years, he served the best possible

apprenticeship for the future diplomatist, and returned to England in his thirtieth year, a most accomplished, polished, and witty cavalier—hiding, as did many of Elizabeth's greatest men, astuteness, prudence in affairs, keen insight into men, and all the learning of the time, under a gay and courtier-like dress and demeanour.

Like flows to like; and Wotton found in Essex a patron and a friend. But the friendship of Essex was dangerous; and when the wild conspirator, driven into folly by the intrigues of Raleigh, expiated his madness in the Tower, Wotton, warned in time, took refuge on the Continent, where he remained, till, within one year of Elizabeth's death, he made his romantic but politic journey to see James VI. in Scotland. For the Duke of Florence, suspecting, from some intercepted letters, that there was a design on the part of the Jesuit party to poison James, sent Wotton into Scotland to warn the King. He took the disguise of an Italian gentleman, and the name of Octavio Balbi, and, arriving at Stirling, revealed secretly to the King his message and his real name. James kept the matter concealed, and Wotton departed, still as an Italian, delighted that he had secured a favourable position in the

memory of the presumed heir of the English crown.

A year after, Elizabeth died; and James, on coming to England, surprised Lord Wotton by asking him "if he knew one Henry Wotton, that had spent much time in foreign travel?" "Sire, I know him well; he is my brother." "Send for him," replied the King, "and when he shall have come to England, let him come privately to me." James had not, in this case, at least, the fault of the Stuarts; he both remembered and rewarded Wotton. For, on Wotton's arrival and appearance at court, he embraced him, called him "Octavio Balbi, the most honest and the best dissembler living;" and declared openly, before the court, that he had had "the most real testimony to Wotton's faithfulness and ability to manage an embassy, in which business he would shortly find him employment." Shortly after, the King knighted him, and sent him as ambassador to Venice.

During twenty years he fulfilled his office in that queenly city, to the honour of England, and to the delight of the Venetians. The art, the learning, the wit and wealth of the Republic crowded to his splendid entertainments, were intelligently

patronised by him, and found in him learning as acute, and wit as bright, as that which then adorned the city. With Paul Sarpi he discussed theology and history. There he may have talked with the great discloser of the heavens, Galileo, who was an intimate friend of Leonardo Donato, Doge of Venice in 1606, “a wise and constant man.” There, when the moonlight was dancing on the waters of the Grand Canal, as it dances nowhere else in Europe, and when from the glorious palaces, glowing still in Wotton’s time with the frescoes of Titian, Giorgione, and Tintoret, and ablaze with gold and with marbles, purple, jasper-hued, and primrose-coloured, light and music streamed upon the Rialto and the quays—whence the commerce of the world had not yet departed—Wotton might often have been seen sweeping by in his gondola full of company, and playing on the same viol-de-gamba which he left in his will to his friend Dr. Bargrave, Dean of Canterbury. The great artists had submitted to death before Wotton arrived at Venice, but he was still a patron of the arts, although his purchase of four Bassanos, and only one Titian, which, by-the-bye, he never took the trouble of identifying, does not speak well for his artistic perception.

No happier life can be conceived than that of Wotton's during these twenty years. It is happiness itself to live in Venice now, though "Tasso's echoes are no more." It must have been, in our ambassador's time, the supremest felicity; for though the decay of the bride of the Adriatic had begun, her beauty was still untouched by war, and Wotton himself, honoured and loved by Venetian and by English, was the centre of all the entertainment, wit, and wisdom of the place.

It would have been a miserable thing, if he had been a young man, to leave his work in the city of the sea; but he was now growing old, and his heart turned to England. He came home the year before King James died, and having been always careless in his expenditure, but always more for his country's honour than his own utility, he was burdened with debt, and sought a place from the Crown. The provostship of Eton fell vacant, and Wotton received it from the King, though one of the candidates was Bacon. He entered into Holy Orders immediately, and rejoiced in the opportunity now afforded him, at the age of sixty, of serving in quietude the Divine Master he had served so long in the world. "I have now," he

said to a friend, "leisure to examine the errors of my life past, and to prepare for that great day wherein all flesh must make an account of their actions; and, after a kind of tempestuous life, I now have this advantage from Him that makes the outgoings of the morning to praise Him, even from my God, whom I daily magnify for this particular mercy of an exemption from business, a quiet mind, and a liberal maintenance, even in this part of my life, when my age and infirmities seem to sound to me a retreat from the pleasures of the world, and invite me to contemplation, in which I have ever taken the greatest felicity."

This charming passage expresses thoughts which made their quiet home in the heart of Wotton. He welcomed the pure thoughts and silent groves of the country. There he declared that—

The wingèd people of the sky shall sing
My cheerful anthems to the gladsome spring.

And there he bid farewell to all the vanities of the world.

Farewell! ye gilded follies, pleasing troubles;
Farewell! ye honoured rags, ye glorious bubbles;
Fame's but a hollow echo, gold pure clay,
Honour the darling but of one short day.

His life was spent holily and happily. The old

man, we are told, never left the school without “dropping some choice Greek or Latin apophthegm or sentence that might be worthy of room in the memory of a growing scholar.” He watched over and encouraged all the youths who showed any genius or diligence. He adorned the Hall with pillars and with pictures. He spent the unemployed hours of the morning in reading his Bible and in private prayer, and in writing his work on education. He talked pleasantly at dinner with the old friends and the literary men who came frequently to see him. In the evening he and dear old quaint Izaak Walton wandered, rod and line in hand, along the reaches of the Thames, angling—“an idle time,” he was wont to say, “not idly spent”—chiefly staying at a bend in the stream close to Eton College, at the spot where the South-Western Railway now crosses the river.

Always gentle and wise of speech, he never violated the dignity and quiet of his age by wrangling on religion. He hated controversy, and caused to be written this epitaph upon his tomb:—“Here lies the first author of this sentence, ‘The itch of disputation will prove the scab of the Church.’ Enquire his name elsewhere.” It was a peaceful evening life, and the thoughts which it

suggested are given by himself, in one of the most delicately felt poems in the English language—a poem which, as it embodies in close and clear thinking Wotton's life at Eton, and as it deserves to be better known, we quote here :—

How happy is he born and taught,
That serveth not another's will ;
Whose armour is his honest thought,
And simple truth his utmost skill !

Whose passions not his masters are,
Whose soul is still prepared for death,
Untied unto the worldly care
Of public fame or private breath.

Who envies none that chance doth raise,
Or vice ; who never understood
How deepest wounds are given by praise ;
Nor rules of state, but rules of good.

Who hath his life from rumours freed ;
Whose conscience is his strong retreat ;
Whose state can neither flatterers feed,
Nor ruin make oppressors great.

Who God doth late and early pray,
More of His grace than gifts to lend ;
And entertains the harmless day
With a well-chosen book or friend.

This man is freed from servile bands
Of Hope to rise or Fear to fall ;
Lord of himself, though not of lands ;
And having nothing, yet hath all.

So living, he commended his soul to God, and

died in the year 1637, having written shortly before his death these noble words: "I now see, my dear friend, that I draw near my harbour of death: that harbour which will secure me from all the future storms and waves of this restless world; and I praise God I am willing to leave it, and expect a better: that world wherein dwelleth righteousness, and I long for it!"

To his literary abilities his writings, published in 1651, under the title of "*Reliquiæ Wottonianæ*," bear ample witness. The vigorous youthfulness of thought, and the condensed energy of language, which characterised the writers of the Elizabethan period, are both found in his prose. In the few pieces of poetry which he has given to our literature, there appears the fresh love of Nature and the mixture of delicate feeling with strong thought, which make the lyrics of that time at once our delight and our despair. We will give one example, with which we close our paper: an example in which we see the chivalry—which, remaining over to the man from the reign of Elizabeth, even the deadly formality and pedantry of James could not extinguish—and the happy skill in refined compliment of the courtly ambassador. It is written in honour of his dear and Royal Mistress

the Queen of Bohemia, whose cause he pleaded at the court of Ferdinand II.

Observe the way in which every verse artistically leads up to the last, and, while beautiful each in itself, serves only to strengthen, not to enfeeble, the noble compliment in the climax.

To the most illustrious Princesse—the Lady Elizabeth.

You meaner beauties of the night,
That poorly satisfy our eyes
More by your number than your light !
You common people of the skies !
What are you, when the sun shall rise ?

You curious chanters of the wood,
That warble forth Dame Nature's lays,
Thinking your voices understood
By your weak accents—what's your praise
When Philomel her voice shall raise ?

You violets that first appear,
By your pure purple mantles known,
Like the proud virgins of the year,
As if the spring were all your own—
What are you when the rose is blown ?

So, when my mistress shall be seen,
In form and beauty of her mind,
By virtue first, then choice a Queen,
Tell me, if she were not designed
The eclipse and glory of her kind ?

II.

JAMES FERGUSON,

THE SELF-TAUGHT ASTRONOMER.

A HUNDRED years ago, there were living in London three intimate friends, who, by self-help and self-instruction, had risen from the humblest conditions to positions of honour and repute among the foremost men of their time; and now their names, Benjamin Franklin, John Harrison, and James Ferguson, to wit, are famous in the annals of science, while the results of their labours are distinctly traceable in the history of civilisation.

To some memorials of the last-named of these three remarkable men we propose to devote this paper. When Ferguson published, in 1773, his "Select Mechanical Exercises," he prefaced his work with that famous "Account" of his early struggles, which has since become a favourite theme with those writers of exemplary biography who seem to think that any loutish youth in England has only to assume the armour of their hero to become equally victorious in the battle of

life. The account of Ferguson's early life, however instructive, is not adequate to his reputation as a philosopher ; and as his works and inventions are now seldom met with, we are glad to see that, in a recently published octavo volume, Dr. Henderson has compiled an ample "Extended Memoir" in continuation of the original autobiography. That very charming story of youthful effort has now been supplemented with a clear account of after-success, and made more interesting by the editor in his illustration and correction of its details. Thus, while Ferguson merely states that he was born "a few miles from Keith, a little village in Banffshire," Dr. Henderson has been able to identify the very spot as the Quoir or Core of Mayen, eleven miles to the east of Keith, and in the parish of Rothiemay, two miles and a-half from the village of that name. It appears, both from the evidence of Ferguson's elder brother, and from parochial registers, that the astronomer was born here "on the 25th of Apryle, 1710," and not in the cottage a "few miles from Keith," to which his father afterwards removed.

Ferguson tells us that he learnt to read by hearing his father instruct his elder brother ; and that when any difficulty occurred in his text-book, the

“A B C, and Shorter Catechism,” he used to consult “a neighbouring old woman, who gave him such help as enabled him to read tolerably well before his father had thought of teaching him.” His father might well be “agreeably surprised” to find him in his seventh year reading by himself. “He thereupon,” says Ferguson, “gave me further instruction, and also taught me to write, which,” he adds, “with about three months I afterwards had at the grammar-school (the parish school) at Keith, was all the education I ever received.”

His father, a small crofter, who had to support a family by his daily labour and the produce of a few acres of land, must have had latent within him much of that mechanical skill which, by no accident, came to such maturity in his son. We know he had a lathe, which he “sometimes used” —very probably, as Dr. Henderson suggests, in order to eke out his little income by the manufacture and repair, at odd hours, of “spinning-wheels, pirn-wheel, reels, and looms,” which were then constantly in use by all the poorer women in the neighbourhood. Ferguson himself tells us that at the age of seven or eight, his own taste for mechanics was aroused by seeing his father apply

a prop and lever to an upright bar, to support the roof of his cottage, when under repair.

This "odd accident," as he calls it, set his mind to work in examining and experimenting on the various properties of the lever; this led him to construct and determine the properties of the wheel-and-axle as a series of levers having united points. He found that in these machines "the advantage was as great as the space 'gone through by the working power exceeded the space gone through by the weight." He also found this property in the wedge, though he happened never to think of the screw as a spiral form of the wedge. At the age of ten, the juvenile experimental researches were embodied in a written "Treatise," which the young author fondly imagined was the first ever produced upon the subject. From his tenth to his fourteenth year Ferguson was "put out to a neighbour to keep sheep;" and it was in this, his first and early situation, that he began to study the stars in the night, while the light and easy nature of his occupation enabled him to devote much of his time to making models of "mills and spinning-wheels," and such things as his fancy or his hand-craft enabled him either to copy or construct. A second engagement of

four years on a larger farm embraced the turning-point of Ferguson's life. It was at Ardneadlie, now known as Braehead, about one mile to the S.S.W. of Old Keith, that Ferguson, between the fifteenth and nineteenth years of his age, began to determine, by the use of a thread and beads, the position and paths of stars and planets, and to delineate his observations on paper, while his indulgent master—proud of such a servant—delighted to encourage him, and even to relieve him of his ordinary work. The farmer, James Glashan, who deserves the highly honourable and grateful mention made of him by Ferguson, one day sent his protégé to the minister of the parish with his star-maps; and it was on this errand that Ferguson met with “the most extraordinary man he was ever acquainted with.” This was Alexander Cantley, butler to Grant of Achwynannie, who was engaged in painting a sun-dial on the corner of the parish school-house when Ferguson passed. A mutual examination of each other's work ensued, and on the same fortunate day the clergyman recommended the young astronomer to the notice of Cantley's master. This incident resulted in his entering Mr. Grant's service, where he really obtained his “education” from

the butler, who was a self-taught adept in mathematics, Latin, Greek, French, and physic, and who readily instructed Ferguson in geography, arithmetic, and algebra.

After two years, Cantley left Achwynannie, and his pupil refused to be comforted ; so he returned to his father's house, to construct a wooden globe, whereupon he drew a map of the world, and by which he was able to solve the problems contained in " Gordon's Geographical Grammar " — the " great treasure " which Mr. Cantley had bestowed upon him as a parting gift. Ferguson, however, " could not think of staying with his father ; " he therefore entered the service of a miller, who gave him too much to do, and too little to eat ; and, after a year's drudgery, he became farm-labourer to a surgeon, who united the practice of agriculture to that of physic. Here he fared worse than before, for the doctor treated him badly, " kept him constantly at very hard labour," and, what was even less endurable, " never showed him one of his books." At the end of three months, he returned home, disabled for many weeks. His old friend Cantley came to see him in his distress, and to prescribe for his ailments ; and he amused himself by applying his hard-won knowledge of

mill-work to the construction of a clock. The wheels were all of wood, the bell made out of the neck of a broken bottle, and the performance was so satisfactory, that he set about making a watch of similar materials—the mainspring being a piece of whalebone.

Ferguson was now in his twenty-third year; and on his recovery he sought and received the ready patronage of Sir James Dunbar, of Durn, who invited him to live in his house, and procured employment for him in cleaning and mending clocks, and in making globes, drawings, and portraits for his friends. Ferguson was so successful in portraiture, that Sir James's sister, Mrs. Duff, of Dipple, sent him to Edinburgh in 1734, and paid his expenses there for two years, in order that study and practice might fully develope his genius as a painter. Ferguson, however, kept to his pen-and-ink method; and his two years' residence in Edinburgh, if it did not make him a painter, brought him into contact with men of talent, while his own ability as a limner, and the zeal of his benevolent patroness, procured him so much employment that he made "a good deal of money," besides being able to maintain his father and mother in their old age.

In 1736, he returned to Banffshire with a curious fancy in his head. He had read and heard so much about anatomy and physic, which Monro and Rutherford had made "the rage" in the northern capital, that he imagined himself qualified to practise as a surgeon in his native district, and actually took down with him a supply of drugs and plasters for that purpose. But neither fees nor fame attended his practice; and, after two years spent in trying to do what he couldn't, he "left off that business," as he says, "and began to think of taking to the more sure one of taking pictures," for which he was really qualified.

At Inverness, he found himself sufficiently prosperous as a limner to get married, and to devote much time to his too long neglected astronomical studies; and the first result was the invention of a rotula, a cardboard apparatus "showing the place of the sun, moon, and moon's nodes in the ecliptic, with their distances from one another every day in the year; the true time of all the eclipses of the sun and moon from 1730 to 1800 inclusive," &c. &c. This was forwarded to Professor C. Maclaurin, of Edinburgh, and that celebrated mathematician so greatly approved of its ingenious construction, that he urged Ferguson

to return to Edinburgh, offering at the same time to procure the publication of his invention.

Ferguson was thirty-two years of age when he finally set out to follow his new fortunes. His "rotula" was successfully published, and on the invitation of his patron he read a lecture in the college, on an orrery which he had lately constructed.

It was in May, 1743, when Ferguson was thirty-three years of age, that, with this "orrery" and "rotula," and with an astronomical card-dial, he came to London to prosecute his fortune in the capital as an inventor and artist. In point of time, this was exactly the middle of Ferguson's life, for he lived thirty-three years in London; and though he says in his autobiography, written in 1773, that he meant to give a faithful and circumstantial detail of his whole proceedings, from his obscure beginning to the present time, circumstances seem to have compelled the abbreviation of his narrative, for less than one-sixth of the whole is devoted to his life in London. The harvest of so fertile a life was worthy of ampler record, since its seed-time is the subject of one of the most charming histories in the entire range of our literature.

The few pages of Ferguson's autobiography which relate to his life in London, are chiefly occupied with notices of the publication of his various works; and the different memoirs that have appeared, have been written rather to deduce instruction and encouragement from the original narrative than to complete it. We now know probably all the facts and circumstances relating to the second half of the astronomer's life that can be discovered. From Ferguson's "Common-place Book," a MS. hitherto unknown to biographers, and from a perseveringly collected series of private letters and other papers, Dr. Henderson has been able to supplement a description of all Ferguson's inventions, with many interesting incidents of his life not less honourable to his memory.

The construction of apparatus, from a model of the solar system to that of a hand-mill, and the discussion of problems, from squaring the circle to the number of the beast, pursued with matchless industry and ingenuity, will always be attractive to a large class of readers; but the details of that other and higher life-problem—the steps of self-maintained advancement from the position of a shepherd-boy to that of a man prosperous, beloved,

and famous—must ever be the object of delight to all who think well of their kind, or wish to see them influenced by so noble an example.

Although Ferguson continued to “draw pictures,” till failing eyesight compelled him to abandon the profession of limner, yet, from his arrival in London, he devoted his time and skill more and more to the construction of all sorts of astronomical apparatus—such as orreries, eclipsaria, planetaria, globes, dials, solar and lunar apparatus, chronometers, solar and tidal clocks, perpetual almanacs, &c., and afterwards, when his position as a popular scientific lecturer required it, to the invention of pyrometers, pygrosopes, centrifugal machines, cranes, hand-mills, whirling tables, and various hydrostatic machines and models.

In 1748, five years after coming to London, Ferguson is named in Kent's Directory as “Astronomical and Mathematical Teacher, Surrey Street, Strand,” and in the same year he commenced giving lectures on astronomy. His first appearance in this character was in Christ's Hospital; and his success in London and in Bristol and other provincial towns induced him to extend his “course,” so as to embrace “mechanics, pneumatics, hy-

draulics, hydrostatics, electricity, optics, and dialling." This led Ferguson to construct many pieces of illustrative apparatus not yet superseded ; but his success in the principal towns in England produced infinitely more important results, which we shall afterwards notice.

In 1754, Ferguson published a pamphlet, entitled "An Idea of the Material Universe, deduced from a Survey of the Solar System." It is an extension of a tract on the same subject, published at Norwich in the previous year. His principal work—"Astronomy Explained upon Sir Isaac Newton's Principles"—appeared in 1756 ; and it is nearly half a century ago since the late Sir David Brewster edited the sixteenth edition of this very popular book. It deservedly raised Ferguson to be esteemed as one of the first philosophers of his day ; and, having been translated into several languages, continued, till the beginning of the present century, to be a favourite treatise both in England and America. The quondam shepherd, by times labourer, miller's man, clock-cleaner, and quack-doctor, had now taken his rightful place among the most famous men of his day ; and artists were eager to delineate the features of one who, twenty-five years before,

would have been glad to “draw their pictures” for the merest pittance.

Ferguson’s lectures and inventions were well patronised by men of rank; and he seems to have been a favourite of that portion of the Royal Family that lived in Leicester House in those days. George III., soon after he succeeded his grandfather, bestowed upon him a pension of £50 a-year, which he drew till the time of his death—fifteen years afterwards—and which in England must be considered a very munificent grant to a man of science, though, of course, the same could not be said of any other civilised country. George III. used to amuse himself by working at the lathe, and it has been said of him that, “with industry, he might have made forty or fifty shillings a-week as a hardwood and ivory turner.” He might thus be able to derive instruction from his interviews with Ferguson, whom, from 1768 to 1776, he frequently summoned to talk with him on mechanical and scientific topics, both at Kew and St. James’s.

Ferguson’s “Lectures,” published in 1760, and dedicated “to Prince Edward,” who had “often condescended to honour the professors of mechanical and experimental philosophy with his

presence and particular favour," raised the author's reputation still higher than his former work on astronomy had done. It became a standard textbook of physical science in England and America. It was translated into several languages, and maintained its ground so well in this country that Brewster's edition of 1806 was four times reprinted.

An honour which Ferguson might well esteem above the favour of the great was conferred upon him, in 1763, in his election as Fellow of the Royal Society; he was also a member of the American Philosophical Society; and there is ample evidence that his own singular uprightness and simplicity of character secured for him, through a long, busy, and successful lifetime, the cherished friendship of men in all ranks of society.

A very remarkable contrivance called the "Mechanical Paradox" was invented by Ferguson about the year 1751. It is described in three of his works, where it is said to have been "contrived on a very peculiar occasion." From a long and very characteristic letter, written by the astronomer shortly before his death, and addressed to his friend the minister of Glass, in Banffshire, it appears that the "peculiar occasion" of its production was, that Ferguson might prove to a

sceptical watchmaker, who denied the possible existence of the Trinity, that, even in matters wherewith he was better acquainted, there might be things equally contrary to untrained reason.

This letter, dated from No. 4 in Bolt Court, Fleet Street, London, April 10, 1776, is so little known, and so curiously illustrative of the writer's habits of thought and expression, that we extract the part, nearly the whole of it, which relates to the "Mechanical Paradox":—

"One evening I went to a weekly club with a friend, and on our entering the room (or very soon after), a watchmaker began to hold forth violently against a Trinity of Persons in the Godhead, wondering at the impudence of the person who broached such an absurd doctrine, and at the weakness and folly of every one who believed it. I happened to sit just opposite to him. The table was between us, and (you may believe) plenty of wine and punch upon it. I gave him a severe, frowning look, on which he asked my opinion concerning the Trinity. I told him that all my belief thereof depended upon the opinion I had of the sure knowledge and veracity of the Revealer; but that I did not think it was a proper thing to be talked of over our bottles, bowls, and glasses, and

should therefore be desirous of talking to him about his own business.

“ ‘Very well,’ said he ; ‘let us talk about it.’

“ ‘Sir,’ said I, ‘I believe you know very well how one wheel must turn another, or how a pinion must turn a wheel, or a wheel a pinion ?’

“ ‘I hope I do,’ said he.

“ ‘Then,’ said I, ‘suppose you make one wheel as thick as other three, and cut teeth in them all, and then put the three thin wheels all loose upon one axis, and set the thick wheel to them, so that its teeth may take into those of the three thin ones ; now turn the thick wheel round : how must it turn the others ?’

“ Says he, ‘Your question is almost an affront to common sense ; for every one who knows anything of the matter must know that, turn the thick wheel which way you will, all the other three must be turned the contrary way by it.’

“ ‘Sir,’ says I, ‘I believe you think so.’

“ ‘Think !’ says he ; ‘it is beyond a thought—it is demonstration that they must.’

“ ‘Sir,’ said I, ‘I would not have you be too sure, lest you possibly be mistaken. And now, what would you say if I should say that, turn the thick wheel which way you will, it shall turn one of the

thin wheels *the same way*, the other *the contrary way*, and the third *no way at all?*'

"Says he, 'I would say that there never was anything proposed that could be more absurd, as being not only above our reason, but contrary thereto, and also to plain fact.'

" 'Very well,' says I. 'Now, sir, is there anything in your ideas more absurd about the received doctrine of the Trinity than in this proposition of mine?'

" 'There is not,' said he; 'and if I could believe the one, I should believe the other too.'

" 'Gentlemen,' said I (looking at the company), 'you hear this—bear witness to it.'

"The watchmaker asked me whether I had ever made or seen such a machine. I told him that I had not, but I believed that I could make it, although I had never thought of it till that instant.

" 'Your head must be wrong,' he replied; 'for no man on earth could do such a thing.'

" 'Sir,' said I, 'be my head right or wrong, I believe I can not only do it, but even be able to show the machine, if I may be admitted into this company on this day se'nnight.'

"The company, who, with serious faces, were

very attentive to all this, requested that I would come.



FERGUSON'S MECHANICAL PARADOX.

“So I made the machine all of wood, and carried it (under my coat) to the same room on the day appointed; and there was the watchmaker.

“ ‘Well, old friend,’ says he, ‘have you made your machine?’

“ ‘Yes, sir,’ said I; ‘and there it is: let us take it to pieces. Are these wheels fairly toothed and fairly pitched into the thick wheel?’

“ ‘Yes, they are,’ said he.

“I then turned round the great wheel, whose teeth took into those of the three thin wheels, and asked him whether the uppermost thin wheel did not turn *the same way* as the one did that turned it, whether the next wheel below did not turn *the contrary way*, and the lowest thin wheel *no way at all*.

“ ‘They do,’ said he; ‘and there is a fallacy in the machine.’

“ ‘Sir,’ said I, ‘do you detect the fallacy, and expose it to the company.’

“ ‘He looked a long while at it, took it several times to pieces, and put it together again.

“ ‘Sir,’ said I, ‘is there any fallacy in the machine?’

“ ‘I confess,’ said he, ‘I see none.’

“ ‘There is none,’ said I.

“ ‘How is it, then, that the three thin wheels should be so differently affected? The thing is not only above all reason, but is even contrary to all mechanical principles.’

“ ‘For shame, sir!’ said I; ‘ask me not how it is, for it is a simpler machine than any clock or watch that you ever made or mended; and if you may be so easily nonplussed by so simple a thing in your own way of business, no wonder you should be so about the Trinity; but learn from this not for the future to reckon *every* thing absurd and impossible that you cannot comprehend. But now I hope you remember what you said at our last meeting here—namely, that if you could believe such a thing as this, you would then believe the doctrine of the Trinity. You own the truth of the machine; what do you say to your promise?’

“He humm’d and ha’d, and asked me whether I would let him take it home to consider it. I told him he might, but desired he would bring it to me to-morrow morning. He promised he would, and did so; but gave it me with some hearty curses, telling me he saw it was true, but did not understand it, and wanted me to explain it to him, which I refused. I kept it for six years without finding any person who could explain the principles on which it acted, and then put the sun and earth with ecliptic and moon’s orbit to it, seeing it would then be a kind of orrery, and published the description.”

As a model of the “Mechanical Paradox” may readily be constructed by any one out of a few pieces of soft wood, with the aid of a pocket-knife and pair of compasses, we shall give a short account of the parts, which may be sketched on paper and reproduced easily.

The machine consists of two pieces of thin wood, B, C, made into a frame by being joined at the corners. This frame, by the use of a handle, *n*, may be turned round an axle, *a*, which pierces the frame, and is fixed in a stationary board or table, A, and carries within the frame an immovable wheel. This first wheel, which we shall

call D, when the frame is made to revolve, turns a second and thick wheel, E, which, like the remaining three wheels, F, G, and H, moves freely on its axis. F, G, and H, are the three thin wheels driven by the thick wheel E, and in such a manner, when the frame revolves rapidly, that the uppermost one, H, turns the same way as E does; the second wheel, G, turns the contrary way; and the lowest wheel, F, turns no way at all. This curious result may be made more apparent by attaching wire brackets, *f*, *g*, *h*, to tubes fixed in the respective wheels, F, G, and H.

In making the machine of pieces of wood or lead, the wheels may be all of the same diameter; D, E, and F may (D and F must) have an equal number of teeth. G, however, must have at least one tooth less, and H one tooth more, than the fixed wheel D, as in the original model. They may, however, have two or three teeth less and more respectively than D, and this will increase the difference in their forward and retrograde motions.

As has often been the case with eminent men, no descendant lives to bear Ferguson's name. His eldest son was apprenticed to an optician and philosophical instrument maker; but he died

before his father. Two other sons were educated at the University of Aberdeen, and entered the medical profession; one entered the Navy, and died in 1803; and the youngest son, Ferguson's last representative, died in Edinburgh at the age of seventy-five, about thirty-five years ago.

Ferguson died on November 16, 1776, at No. 4, Bolt Court, Fleet Street, where he had resided for ten years. He was buried in St. Marylebone old churchyard. The altar-tomb erected over his grave is now so much defaced, that the inscription is illegible—a circumstance which it would well become his admirers to see to. Surely it is only necessary to be known that the grave of a man, of whom Scotland and the whole nation is so justly proud, is neglected, to ensure the immediate erection of a monument which will at least testify that the present generation is not altogether incapable of appreciating the worth of the great pioneer of popular science. Dr. Henderson made a copy of the epitaph some years ago, and as we hope to see it worthily renewed—it was so well earned—we transcribe it in full: “Here is interred the body of James Ferguson, F.R.S., who, blessed with a fine natural genius, attained the sciences. Astronomy and mechanics he taught

with singular success and reputation. He was modest, sober, humble, and religious, and his works will immortalise his memory when this small monument is no more. He died November 16, 1776, aged 66. On the south side of this tomb lies interred the body of Isabella, his wife, who died September 3, 1773, aged 53. And by her side lies the body of James Ferguson, their eldest son, who died November 20, 1772, aged 24 years."

Sir David Brewster, in his preface to Ferguson's "Lectures," says that "Mr. Ferguson may in some degree be regarded as the first elementary writer on natural philosophy, and to his labours we must attribute that general diffusion of scientific knowledge among the practical mechanics of this country, which has in a great measure banished those antiquated prejudices and erroneous manners of construction that perpetually mislead the unlettered artist." The same eminent writer also regards him as entitled to a higher commendation than that of being reckoned a mere mechanical genius, in possessing that devout and truly philosophic spirit, which is the rarest and noblest endowment bestowed on the highest forms of human intelligence.

Ferguson's personal character was strikingly in keeping with the large and sobering impressions of the great mysteries which astronomical study evolves. In the "Annual Register" of 1776, Dr. Houlston, an eminent surgeon and author, intimately acquainted with Ferguson, states that "he was a man of the clearest judgment, and of the most unwearied application to study; benevolent, meek, and innocent in his manners as a child; humble, courteous, and communicative; instead of pedantry, philosophy seemed to produce in him only diffidence and urbanity, a love for mankind and for his Maker."

We regard James Ferguson as one of the first and most efficient workers in a new educational era, destined to contribute alike to the prosperity and highest well-being of the English nation; may we trust that the tone of his mind—that purity and humility of spirit, inspiring his life and works—as well as his ceaseless efforts to attain and popularise the principles of a truly natural philosophy, may not be lost on the healthier forms of English thought, but remain inscribed on after ages as his own noblest memorials.

He has left us, too, a high example in following out the guidance of his marvellous instincts in

honest and incessant labour—such as best befits the children of light sent for a brief space into this world of darkness, not without a Divine assurance that their energy is in some way related to the unseen destiny of the race.

III.

ALEXANDER VON HUMBOLDT.

IN the range of modern biography there is, perhaps, no life which is a more complete illustration of success—honourable and honoured—than that of Alexander von Humboldt.

He was born at Berlin, September 14, 1769. His father was Major Alexander George von Humboldt; his mother was of French extraction. He had but one brother, William, who was his elder by two years.

The childhood of the two brothers was passed at the Castle of Tegel, about three leagues from Berlin. It was in the midst of pleasant scenery: a dark pine-clad hill rose at the back, in front extended the lake, and beyond it lay the town and famous fortress of Spandau. No traditions of precocious intelligence are recorded of Alexander—the man who outlives family and fellow-workers, and gains twenty years beyond the common lot, leaves no contemporaries of his boyhood to recount

to a new generation the shadows of eminence forecast upon his youth. From such reminiscences, however, as can be collected, we perceive that in his early training lay the germs of his ultimate greatness.

His education began with his brother's in 1775, under Joachim Heinrich Campe, a teacher who went by Rousseau's theory, combining the physical with the mental development of his pupils, and treating the study of the natural sciences as of equal importance with that of the classics and metaphysics. Next to Klopstock, Campe was accounted the greatest of German critics and philologists; but the work of his in which his young scholars probably found most edification was a translation of the famous adventures of "Robinson Crusoe." Alexander's taste for the natural sciences was already awakened, and the hero of that history filled him with a longing desire to visit strange lands upon his own account.

Campe remained but a year at Tegel, and was succeeded in his office by Christian Knutte, a young man, poor in purse, but rich in learning, who pursued the same system as his predecessor. Throughout the childhood of his pupils, and up to the period of their father's death, which happened

in 1779, many distinguished visitors appeared at Tegel—princes, statesmen, old companions in arms, and famous scholars; amongst the last came Goethe and Dr. Ernst Ludwig Heine, the physician of the family, and a learned botanist, who instructed the boys in his favourite science on the system of Linnæus. When they were sent to Berlin to pursue their education, Christian Knutte accompanied them; he also went with them when they were transferred to the University of Göttingen. At this famous seat of learning, the most distinguished teachers during the young Humboldts' residence were Johann Friedrich Blumenbach, Professor of Physiology and Comparative Anatomy; Christian Gottlieb Heyne, a great classic; and Eichhorn, Professor of Arabic, and a profound Biblical scholar.

But the man who exercised the most permanent influence over the mind of Alexander was George Förster, son-in-law to Professor Heyne. He had *seen* what the University sages had but learnt from books. He had outdone the adventurous Robinson Crusoe. At eighteen he had sailed round the world with Captain Cook, and had since written an account of his voyage. In his company Alexander spent most of his leisure, and his

example and conversation mainly determined the bent of the young future student's life.

In 1789, the University course of the two brothers ended. William proceeded to Paris with his old tutor Campe, and Alexander remained in Germany, prosecuting his studies. He applied himself to geology, then a new science, directed thereto by the works of Abraham Werner. Humboldt's first journey was a mineralogical tour with Förster up the Rhine and through Holland to England. He afterwards embodied his observations in a work which supported Werner's theory that all rocks are of aqueous formation. It was his earliest published production.

He next went to a commercial academy at Hamburg, and thence to Freyburg, where he remained a year studying mining under Werner. In 1792 he gained his first appointment as Inspector of Mines in Franconia. Here his duties were very heavy; he had to remodel the mining system throughout, and to travel continually inspecting the working of the new operations; at the same time he lost no opportunity of pursuing his scientific researches; he botanised, he descended into the mines to examine the fungi that grew in the shafts, and, if the district were mountainous, he studied

the rock formations, and speculated on Werner's theory. His powers of continuous labour were marvellous; busy as he must have been at this period, he wrote largely for the scientific journals, and published a work on the local botany of the neighbourhood of Freyburg.

In 1795 he resigned his office of Inspector of Mines, and proceeded to Vienna, where the magnificent collection of exotics gave him great facilities for the study of botany.

During the following year his mother died, and was buried at Tegel, and in the subsequent spring his brother, who was now married, met him at Berlin to divide their inheritance. William's share was Tegel, Alexander's an estate in Neu-mark, which he sold to the poet Franz von Kleist, to raise funds for the journey which was the object of his dreams. Until it should come to pass, he diverted his energies with numerous plans and many short excursions. He made a geological tour with Leopold von Buch through Salzburg, Styria, and the Tyrolese Alps, and in 1798 he went to Paris, where his brother William resided, whose house was a rallying-point for all the French savans and distinguished men who visited that gay capital. Of this period were two abortive

plans for journeys to South America, the Archipelago of the Pacific, New Holland, Madagascar, and the Cape of Good Hope: they were set on foot by the National Museum of France, but fell to the ground for lack of funds to carry them out; and the only good Humboldt reaped from his disappointment was the friendship of Aimé Bonpland, one of the naturalists who had been appointed to accompany the voyage of exploration to South America.

He and Bonpland spent the winter in Spain, and while in Madrid he was presented to the King, who promised him the support of his ministers if he undertook a voyage to the New World. Thus encouraged, he resolved not to risk further disappointment by delay. Furnished with passports and with extensive permission for researches throughout all Spanish America, Humboldt and Bonpland despatched farewell letters to their friends and relatives, embarked on board the *Pizarro*, and got safe out to sea on June 5, 1799. So the great journey was begun.

Humboldt was then in his thirtieth year.

Many portions of the story of Humboldt's great Transatlantic journey with Aimé Bonpland read

like the wildest traveller's tales, but they are told on the authority of his own narratives.

Their first stay was at the Great Canaries, the Pizarro anchoring in the bay of Santa Cruz. Their chief point of interest was Teneriffe; and as the captain could not promise them a delay of more than four or five days, they immediately set out for Orotava, on the western declivity of the volcano.

They started before sunrise; the French vice-consul volunteered himself as guide, and an English gardener joined their party. Proceeding along a lofty aqueduct, draped with ferns, they arrived at the famous dragon-tree, which is mentioned in many ancient documents, and said to have been as gigantic in the fifteenth century as when Humboldt and Bonpland saw it. Its circumference near the root was forty-five feet, and its height between fifty and sixty; it grew in branches candelabrum-wise, and each branch terminated in a cluster of leaves. Continuing to ascend through a forest of chestnut-trees, they gained the rock of La Gayta and Portillo, and afterwards traversing a narrow pass between two basaltic hills, they entered on the great plain of Spartium. Here the landscape changed. Thus far they had seen

only beautiful vegetation everywhere covering the ground, but this plain stretched before them like a sea of sand.

They passed the first night in a cavern, called the English Halt, and at three o'clock on the following morning started again on their way. Two hours' walking brought them to Alta Vista, the ice-sellers' station, beyond which point the ground became utterly destitute of vegetable mould. This tract in all volcanic regions is called Malpays. During the ascent, many curious phenomena were observed; the travellers beheld the clouds spreading below them like a vast plain of snow. The ascent was very fatiguing, and the water-carriers lightened their loads by throwing away the geological specimens that Humboldt and Bonpland had picked up. After a march of three hours across the Malpays they reached the foot of the Sugar-loaf, which was so steep that they were compelled to climb it by an old current of lava, and on gaining the summit they could hardly stand for the violence of the west wind. The crater was surrounded by a parapet of lava, and through a breach in its wall the travellers were enabled to approach the funnel, which was about 300 feet across in its widest part. The heat was percep-

tible only at a few crevices, which gave vent to aqueous vapours and a buzzing sound. The view from this height was very fine, and the atmosphere had now grown so transparent that they could even distinguish the different shades of vegetation, and the vessels at anchor in the port of Orotava. On their return they saw flocks of canaries of a brilliant green colour.

On June 25, the Pizarro left Santa Cruz, and sailed for South America. North of the Cape de Verde Islands, they saw masses of the tropic grape, which grows on submarine rocks forty degrees north and south of the equator. From the twenty-second degree they found the sea alive with flying fish, which threw themselves eighteen feet out of the water, and sometimes fell upon the deck. When the ship entered on the torrid zone, the voyagers began to study the strange beauties of a new firmament. On the night of July 4, they first saw the Southern Cross. The latter part of the passage was less fortunate than the commencement; a malignant fever broke out on board, and a young Asturian, whose mother was a widow, died of it, and was buried in the sea at sunrise. Humboldt and Bonpland determined to leave the infected ship, and on the morning of July 15 they

perceived a low island with sandy hills, which appeared like an agitated sea from the effects of the mirage. On the following day the mountains of New Andalusia rose before them, and Cumana and its castle were seen amidst groups of cocoa-trees. The splendour of the sky, the vivid colouring of the vegetation, the fervent glow of the atmosphere, all proclaimed the grand character of tropic regions.

The travellers presented their credentials, and were cordially received by the governor, who assigned them a house well situated for astronomical and meteorological observations.

Their first excursion was to the peninsula of Araya, their object being to see the salt-mines, and to make geological observations on the mountains that composed it. They started at two o'clock on a lovely cool morning, and sailed up the little river Manzanares, which was bordered with trees of gigantic growth—mimosas, ceibas, and erythrinas—whilst swarms of phosphorescent insects glistened in the air.

At the salt-mines they saw a barefooted shoemaker, of Castilian descent, who had collected the traditions of the country, and who told them some curious particulars of the pearls of Cabagua, speci-

mens of which he gave to Humboldt. He was a grave and dignified person, who despised riches, and the limit of whose ambition was the possession of an ass strong enough to carry a load of plantains.

They then proceeded to the Castle of Araya, which stood on an arid mountain, and looked less like the labour of man than like gigantic rocks of the primeval world. They passed a night in an Indian hut, and in the morning they visited the ruins of St. Iago; the walls had been blown down, but blocks of freestone, 700 and 800 feet square, still remained to attest their enormous strength.

Their next expedition was to the mountains of the Indian missions. The first they reached was that of San Fernando, where an aged but fat and jovial missionary received them kindly, and lodged them for the night. The village, and the extreme neatness of the Indian huts, reminded them of the establishments of the Moravian Brethren in Germany; the dwellings were built singly, but in long wide streets, crossing each other at right angles. The square in the centre of the village contained the church, the mission-house, and a caravanserai for travellers. In these regions every German was considered a miner, and every French-

man a physician, and both travellers had numerous calls upon their skill; wherever Humboldt went, specimens of ore were brought to him, and the inhabitants wished him to explore a wonderful crevice in their mountains, 900 feet wide, and filled with trees interwoven together, because they believed that it contained a gold mine. Humboldt consented, and, assisted by Indians, and accompanied by dogs as a protection against jaguars, he and Bonpland set forth on their expedition. Two caverns opened into this crevice, which emitted fiery exhalations, and the path by which they journeyed was a sort of narrow cornice above a precipice between 200 and 300 feet deep. The farther they advanced the more dense the vegetation became; they collected plants at every step, and the Indians made incisions in the trees, that they might observe the beautiful red and yellow woods that composed them. The supposed gold mine proved to be nothing but an excavation in a black stratum of marl, which contained abundance of pyrites. Humboldt, however, could not succeed in convincing the Indians of the fact; they were persuaded that the metallic grains washed down in the water, must, from their brilliancy, be gold.

The travellers next proceeded onwards to the Convent of Caripe, the principal station of the missions. They were received by the monks with great hospitality, and found a numerous society in the convent. Humboldt was lodged in the cell of the superior, which contained a good selection of books. The valley of Caripe derived its celebrity from the great cavern of Guachedo. It was three leagues from the convent, and the travellers set out to see it, accompanied by a party of monks and the Indian magistrates. Their way lay chiefly through the bed of a torrent, and they came suddenly upon the cavern, pierced in the vertical face of the rock, and forming an arch 80 feet wide and upwards of 70 feet high. A river issued from it, the rock was covered with gigantic trees, and wild vines waved in festoons before the mouth of the cavern. It was inhabited by nocturnal birds, whose fat was a chief article of food and commerce amongst the Indians. The explorers entered the arch, and, following the course of the river within it, they saw heliconias, palm-trees, and arums, growing on its banks; vegetation did not disappear until forty paces from the mouth of the cavern. They advanced 450 feet without torches, and where the light began to fail they heard the

hideous hoarse cries of the nocturnal birds, repeated again and again by the subterranean echoes. Their nests were funnel-shaped and the roof of the cavern was riddled with them like a sieve. The Indians fixed torches upon long poles to show them to the travellers, and, scared by the light, the birds redoubled their cries, and answered each other from the remotest parts of the cavern. The river was from 28 to 30 feet wide, but it was shallow, and in many places the stalactites compelled the explorers to descend into its bed to continue their route; at one point it formed a subterranean cascade, and here vegetation recommenced. The torrent deposited layers of black mould, and the birds dropped seeds, which germinated and grew up into blanched stalks, two and three feet high; but they were so much changed by the absence of light that it was impossible for the travellers to determine their species. Farther than this point the Indians refused to go; they connected mystical ideas with the cavern, and neither the authority of the monks nor the expostulations of Humboldt and Bonpland could prevail on them to pass the cascade. The whole party were therefore obliged to retrace their steps.

When the travellers took their leave of the

hospitable missionaries they crossed a ridge of mountains and a vast savannah to a steep and slippery slope, to which the monks had given the name of "The Descent to Purgatory;" it was a descent which it took them seven hours to accomplish. The road was a series of rocky steps, over which, in the rainy season, the torrents dashed with impetuous haste. The mules, however, knew by instinct the way to go; the guides rode, but Humboldt and Bonpland preferred to walk, to gather plants. It was oppressively hot, and they heard thunder in the distance. Their object was to have gone farther eastward, but as they proceeded they found the routes becoming quite impracticable on account of the heavy rains that had recently fallen; they therefore went to Cariaco, and, embarking in a canoe with the botanical and geological specimens which they had collected on their journey, they returned to Cumana by sea.

They remained at Cumana some time, making preparations for a journey to the Orinoco and Rio Negro. They had before them a ten months' route across a country without any communication with the coast; and having furnished themselves with intelligent guides, on Novem-

ber 16 they left Cumana once more, and sailed down the Manzanares to Caracas. It was the dry season, and while there they saw the savannahs on fire, kindled to improve the vegetation. In February they set out for the Orinoco, and the first marked object they saw on their journey was a famous tree, known throughout the province, by the name of the Zamang del Guayre. It was a species of mimosa, its trunk 60 feet high and 9 thick. Its beauty and peculiarity were in its hemispheric head, 576 feet in circumference, with the branches bent downwards in the form of an umbrella. The early conquerors of the province saw this tree in the same state as Humboldt did; he considered it at least as old as the dragon-tree of Orotava.

The travellers journeyed by night, on account of the excessive heat. They visited the hot springs of Chinchera, which they found of a temperature sufficiently high to boil eggs; and while passing through the valleys of Aragua they saw trees, the trunks of which yielded from incisions abundance of glutinous milk, devoid of acidity, and of a balmy smell. They both drank of it, and were told that it formed a very nourishing part of the native diet. These valleys were luxuriantly fertile,

producing everywhere plantains, water-melons, and calabashes. Here also they saw numerous bands of howling monkeys, going slowly in procession from tree to tree through the forests. The uniformity of their movements was very remarkable. When the trees did not touch each other, the male, who led the party, suspended himself by his tail, and, dropping from the branches, swung himself to and fro until his oscillations brought him within reach of a neighbouring bough. The whole file performed the same movement on the same spot.

When the travellers entered upon the Llanos, they found the plains level for thirty square leagues. In these vast and profound solitudes vegetation was scant and rare, and no dwellings were to be seen upon the dreary wastes. It was not until they had journeyed two days and two nights that they reached a lonely farm, where they rested, and the following morning resumed their way on horseback at two o'clock, to avoid the heat of the day. Arrived at Calabozo, they found a Spaniard, who had constructed an electrical machine; but what Humboldt had the greatest curiosity to see here were the gymnoti, or electrical eels. He and Bonpland went, there-

fore, in company with several Indians, to make their experiments in the open air; for so great was the dread the natives had of the shocks they caused, that, though Humboldt offered two piastres for a strong and vigorous fish, if brought to his house, he failed in obtaining what he desired. They were conducted by their guides to a stream which had shrunk into a muddy basin during the drought, and which was surrounded by fine trees. To catch the gymnoti in nets was extremely difficult, and the Indians fished for them with horses, in the following manner. They scoured the plain until they had collected about thirty wild horses and mules, which they drove into the pool. The tumult brought the eels out of the mud and excited them to battle. These aquatic serpents—of a yellowish, livid hue—swam on the surface of the water, and crowded under the animals, which the Indians prevented from escaping with their long harpoons. Stunned by the noise, the eels defended themselves by repeated discharges of their electric batteries, and several horses sank beneath the violence of the invisible strokes which assailed them on every side, while others, with eyes expressing the utmost anguish, and manes erect, endeavoured to fly from the con-

test. Two horses were soon drowned ; stunned by the shock, they sank, and were unable to rise again in the long struggle between the gymnoti and the other horses. The travellers anticipated that all the animals would be thus destroyed ; but, after a time, the eels were wearied out and dispersed : they would require long rest and much nourishment to repair the galvanic force they had lost. Some of them now approached the edge of the pool, and the Indians took them with their harpoons, experiencing no shock as they raised them into the air, when the cords to which the harpoons were fastened became dry.

The travellers left Calabozo well satisfied with their stay, and, towards the end of March, arrived at the mission of San Fernando, from which place, two days later, they set sail up the Rio Apure in a large canoe, managed by a pilot and four Indians, for the Orinoco. They soon entered a region inhabited only by jaguars, tapirs, and crocodiles. In some parts the river was 900 feet wide and straight as a canal, with magnificent forest-trees on its banks. In others, where the shore was open, they saw as many as eight or ten crocodiles lying on the sand. Bonpland went ashore to measure a dead one, and found it 22 feet

3 inches in length. The travellers heard of a girl who saved her life, when seized by one of these terrible creatures, by thrusting her fingers into its eyes; it quitted its hold, but bit off her left arm. The crocodile is an excellent swimmer, even against the strongest currents, but it turns slowly, and so occasionally loses its prey.

While going up the river the whole party commonly slept ashore in hammocks, slung between the trees, and were terribly disturbed by the cries and howling of the beasts by night. At Joval they saw a jaguar as large as a Bengal tiger; and one day, when Humboldt had landed, he suddenly found himself within eighty paces of a jaguar lying under a ceiba-tree: but he made a swift, silent *détour*, and escaped safe to the boat. Thus far they had been sailing on the Rio Apure, but now they came to the Orinoco, with lovely hills and majestic granite mountains in the distance. A vast plain of water spread around them like a lake, and the shores, parched by the heat, were bare as the sea-beach. At low water the river was 6,000 feet wide; in the rainy season it increased to 32,000. Proceeding southwards, the mountains of Encaramada appeared to rise from the water, as if seen on the horizon of the sea. The natives

of the district have a tradition of great floods that once prevailed here, where the waves of the sea beat against the lofty granite rocks which the travellers saw sculptured at an immense height with hieroglyphic figures. "At the time of the great waters," said the Indians, "our forefathers went to that height in boats."

At the port of Encaramada they met with some Caribs going up the river for the famous fishing for turtles' eggs, and they landed at an island celebrated for its abundant supply, where they found a swarm of 300 Indians encamped to make their harvest of eggs. Humboldt and Bonpland made a tour of the island, accompanied by a missionary and a trader. The beach was a plain of smooth sand, and they were shown by the missionary, with his long pole, where the eggs lay. By thrusting it straight into the ground, the sudden want of resistance betrayed the layer of soft earth where they were deposited. It was like a mining country, divided into lots, and worked with the utmost regularity. The eggs were broken into long wooden troughs, filled with water, where they remained exposed to the sun until the oily part collected on the surface, when it was skimmed off and boiled, to make

turtle butter. It was used for burning in lamps, and also in cookery.

They had an accident when they left the island. The boat was nearly upset by a sudden squall, and Humboldt with difficulty saved his journal, while books, papers, and dried plants were instantly afloat. One book they lost, but the other things were recovered; and their Indian pilot, who was to blame for the accident, told them, with the utmost coolness, that they would have sun enough soon to dry their papers. On arriving at Paramura, this man could take them no farther; but Bernardo Zea, a missionary near the great cataracts, volunteered to accompany them in his stead. Here Humboldt saw an Indian lady undergoing a state toilette. She was being painted by her two daughters in black lattice-work on a red ground, with a dot in the centre of each diamond. It was a tedious ceremonial, for Humboldt spent some hours out herborising, and on his return found it still unfinished.

As they ascended the river, they found it crossed from north to south by a chain of granitic mountains, and the waters, confined in their course for five miles by innumerable dikes of rocks which form natural dams, broken into a thousand

foaming torrents. In this region the travellers were terribly tormented by the mosquitoes. In the missions on the Orinoco they furnish endless talk, and one old monk told Humboldt that he had enjoyed twenty years of their intimate acquaintance.

While staying here, the president of the mission gave Humboldt an account of the method of proselytising. Under pretence of recovering young converts, children of eight and ten years old were stolen and detained as serfs of the Christians. Three years before, this missionary had, with his Indians, made an incursion into a native hut, where they found a woman with her three children unprotected. She attempted to escape, but was soon overtaken and captured, and had she resisted, they would have killed her—that extremity even being considered justifiable in such a cause. They were all bound and carried to San Fernando, from which place it was presumed she would be unable to find her way home. Driven to despair by her separation from her husband and her other children, who were out with him when she was captured, she made repeated attempts to escape with her little ones; but she was always retaken, and the missionary having caused her to be cruelly beaten,

at last separated her from those children who had been made prisoners with her. She was conveyed alone to the missions of the Rio Negro up the Atabapo. Being but slightly bound, and judging by the position of the sun that she was being carried farther away from her home and country, she threw herself into the water, and succeeded in reaching the left bank of the river; she was retaken in the evening, however, and, after being cruelly beaten again, stretched on a rock which still bears her name, "The Mother's Rock," her arms were tied behind her, and she was dragged on to the mission of Javita. The same night, with the help of her teeth she broke her bonds, and once more escaped, and four days afterwards she was seen at San Fernando, hovering round the hut where her children were confined. What she had accomplished in that journey the hardiest Indians would have hesitated to undertake. She traversed the inundated woods where the sun never penetrated the clouds; she swam across the rivulets that ran into the Atabapo, and broke her way through the thorny lianas, supporting nature on no other nourishment than the black ants. Instead of relenting in their wicked cruelty, the missionaries again separated her from her children,

and sent her to one of the missions of the Orinoco, where, refusing all food, she starved herself to death.

From the mission of San Fernando to that of Javita, the travellers sailed through the flooded forests in their canoe, and after a tedious and dangerous journey they gained the Rio Negro. They had already travelled 180 leagues in their boat, and to reach the Orinoco by the Cassiquare they would have to sail 320 leagues more. Some of the travellers would have preferred a shorter route, but Humboldt and Bonpland persisted in the plan they had originally laid down for themselves, and accomplished it. They then sailed down the Orinoco to Ataruipe, where there existed a cavern which was the sepulchre of an extinct Indian tribe. In this place they counted more than six hundred skeletons, all regularly arranged. Amongst them were funeral urns of oval form, the handles turned like serpents or crocodiles, and the edges adorned with designs similar to those of ancient Greece. The travellers carried away some skulls and bones, and the Indians, who approached their mules, instantly detected their presence amongst the baggage by the smell of the resin that had preserved them. At the mission of

Aturee, Father Bernardo Zea left them, after having shared all their difficulties and dangers during two months.

The travellers reached Angostura in June, having made a journey of five hundred leagues in seventy-five days. After their privations and hardships, everything appeared to them luxurious, and for a short time Humboldt and Bonpland, in perfect health, applied themselves to drying such plants as they had been able to preserve in the damp regions through which they had come: but on the same day they were attacked with a disorder, which in Bonpland took the character of a low fever. Humboldt soon recovered by taking bark and honey, but Bonpland remained for several weeks in an alarming condition. In July, however, he was sufficiently strong to continue their travels, and proceeding to Nueva Barcelona, they there embarked in an open boat with all their collections and returned to Cumana by sea. Their friends came out to meet them with joyful congratulations, for a report that they had perished on the Orinoco had been current for several months.

At Cumana they were detained some time, but in December they made a voyage to Cuba, and

returning to South America in March, landed at Carthagena. Here they divided their collections into three portions, sending one to Germany, one to France, and the third to Havanna, taking every precaution to have them remitted to the Museums of Natural History at Paris, or to Sir Joseph Banks in London, in case the vessels by which they were despatched were captured by French or English ships. This anxious business accomplished, they ascended the Rio Magdalena, Bonpland botanising as usual, and Humboldt making a chart of the river district. In five-and-thirty days they reached Honda, and thence travelled on mules to Bogota, which place they reached in June, pursuing their researches.

Thence they went to the Lake of Guatavita, a solitary spot in the mountains of Zipaguira, 8,500 feet above the level of the sea. The old Indians held it in great veneration, and there was a channel by which the Spanish conquerors had attempted to drain it, to recover possession of the treasures said to have been hidden in its depths at their approach.

Towards the end of September they left Bogota and set out for Quito, taking the least frequented road. Early in their journey they crossed two

natural bridges of rock, one of them 312 feet above the torrent which it spanned. After passing these bridges they reached the mountains of Quindrio, the most difficult pass of the Cordilleras. It lay through a dense forest, which took them twelve days to traverse. There was no hut by the way, and no means of subsistence, so that travellers always carried a month's provisions, lest they should be delayed by the torrents which, on the melting of the snow in the higher regions, frequently became impassable. The road was 1,450 feet above the sea-level, and in many places the pathway was barely a foot wide; in others, the rock, being covered with a stratum of clay, was channelled into deep gullies of mud, which made the journey excessively arduous, both to the explorers and their oxen of burden. Humboldt and Bonpland went on foot, and twelve oxen carried their collections, instruments, and provisions, through an incessant deluge of rain. When the travellers' shoes were worn out, they went barefoot; for the road, though wearisome and difficult, was not dangerous.

In January, 1802, the travellers reached Quito, which place was their head-quarters for nine months. While here they attempted the ascent

of Cotopaxi and Chimborazo, the two grandest peaks of the Cordilleras; but they were defeated by the difficulties of the enterprise. In the eruption of 1739, Cotopaxi vomited red-hot stones 3,000 feet above the crater, and its roaring was heard at a distance of 200 miles. It is the most terrible volcano in the whole range: its form is a perfect cone, crowned with snow, and its appearance is eminently grand and beautiful. In the attempted ascent of Chimborazo, the explorers were accompanied by a young Spaniard. They started from the southwest side, traversing great plains, which rose one above the other, like terraces, until they reached that of Sisgun, 12,400 feet, above the level of the sea. They continued to ascend until they reached Yava-Cocha, a circular lake, the highest spot yet reached by other travellers. Here they left their mules, and, crossing a plain of tawny grass, they came to a region where the rocks rose in columns, like an enchanted forest of stone. Passing over this district, they arrived at a place where the path became too steep and the snow too dangerous to venture on. All the guides except one refused to proceed any farther, and he led them by a route which he called a

“knife-blade,” sometimes on hands and knees, and always with their poles testing the way before them. For another hour, through increasing mist, they persevered; the barometer showed them an altitude of 18,380 feet; and here they began to suffer from the rarefaction of the air. They breathed with difficulty, their heads swam, and their eyes became suffused with blood. Condors came swooping down the terrible pass. Once the mist parted, and they beheld the vast dome so near to them that they believed they should certainly reach the summit. They hurried on, but all at once their farther progress was stopped by a vast chasm, 400 feet deep and 60 feet wide. They had attained a height of 19,200 feet. They descended the mountain in a storm of hail and snow.

In another excursion they crossed a bridge 120 feet long, formed of ropes, manufactured from the fibrous roots of the *Aguaya Americana*, three or four inches in diameter. It was by a bridge of this kind that a permanent communication was kept open between Lima and Quito. On their way to Cotopaxi, they saw the house of the Inca Huayna-Capac. It formed a square of 100 feet every way, with walls of burnt

porphyry, three feet thick, and the stones as regularly wrought as in Roman buildings. The doors were similar to those of the ancient Egyptian temples. They saw, also, the remains of the great roads of the Incas, which were as fine as any of the old Roman roads. They all met in Cuzco, the centre of the Government, and extended to the limits of the kingdom; but the Spanish conquerors permitted them to fall into disrepair, even where they did not wilfully destroy them.

Approaching the basin of the Amazon, the travellers were refreshed by the sight of a luxuriance such as they had nowhere seen surpassed. They afterwards visited the Baths of Pultamarca, and the palace and prison of the Inca Atahualpa. The treasures collected by the Spanish conquerors, from the temples and palaces of this prince, were estimated at fifteen millions of dollars. Humboldt was shown the slab on which tradition said he was beheaded, still marked with stains of blood.

While travelling through these districts, the explorers felt a keen longing once more to behold the sea, and on reaching the Alto de Guanamarca, the great Pacific Ocean, for the first time,

lay beneath their eyes. At the end of the year they sailed for Mexico. Touching at Acapulco, on the voyage, they heard Cotopaxi, 150 miles away, discharging its terrible artillery.

Arriving in Mexico, during the following March, they proceeded to the capital, where they found a school of mines, a botanic garden, and an academy of painting and sculpture. The city of Mexico is founded on the ruins of the ancient capital, and Humboldt saw certain Aztec idols which had been unburied there some years before; besides these the stone of a sacrifice was exhibited to him, and he examined some Aztec manuscripts, written on stag-skins, some of them seventy feet in length. But uncouth idols, and manuscripts of hieroglyphics, which he could not read, were much less attractive to him than the book of Nature; and in the beginning of May he set out for the mines of Moran, where he remained for months, inspecting the operations; thence he proceeded to the mines of Guanaxuato, the richest in the kingdom. The quantity of silver at this period extracted from the Mexican mines was greater than that furnished by all the mines in Europe, and there was scarcely a silver mine that did not contain also gold; in some were found, as

well, opals of the rarest beauty; and muriated silver abounded in the veins of Catorce and Cerro San Pedro.

But the wonder of Mexico was the volcano of Jorullo, which rose from the earth by one of the most remarkable physical convulsions on record. In June, 1759, frequent earthquakes and horrible subterraneous noises commenced and continued for fifty days: they then subsided, to break forth towards the end of September more terribly than before. The Indians fled to the mountains, while a level tract, which they had abandoned, for more than three miles square, swelled up in the shape of a bladder, which in the centre rose to an elevation of 520 feet. Those who witnessed this convulsion from the mountains, asserted that flames burst from the ground, and that, through the cloud of ashes and volcanic fire, the surface of the earth rose and fell like a stormy sea. Thousands of small cones, called by the Indians the Ovens of Jorullo, issued from the Malpays, and six large masses, from 1,300 to 1,700 feet each, sprang from a great chasm; the most elevated is the Volcano of Jorullo, which was constantly burning and throwing out immense masses of lava, containing fragments of rock. The

plains in its neighbourhood had been abandoned on account of the excessive heat. Two rivers, whose course was interrupted by the great convulsion in which the volcano was formed, reappeared 6,000 feet farther west, bursting through the vault of the ovens. The Indians attributed these great natural phenomena to the monks.

After this excursion the travellers returned to the capital, where they remained until January, 1804, arranging their botanical and geological collections. They afterwards visited Vera Cruz, where there are remarkable ruins of the ancient Mexican pyramids, and in March they sailed to Havanna. They afterwards went to Washington and Philadelphia, and on June 9 they quitted the New World to return to Europe.

The great journey of five years, so long planned and so often delayed, was accomplished.

There is at Tegel a portrait of Alexander von Humboldt at this date. It represents him as of less than middle stature, firmly and symmetrically built, with an ardent countenance, firm lips, keen blue eyes, square brow, and thick chestnut hair.

When he returned to Paris, he was warmly welcomed by all the French savans. His collec-

tions were the natural history of a continent, more extensive than any in Europe.

With his great journey, his active life ceased for almost twenty years : he did, indeed, make a tour through Central Asia in 1829, but after his return from America he migrated chiefly between Paris and Berlin, and the history of his books is the history of his life. During these twenty years, he wrote all his great works, except his "Kosmos" and amongst his friends he counted Cuvier, Laplace, Arago, and Berthollet. His companion in his Transatlantic explorations, Aimé Bonpland, returned to America in 1815, and after suffering many vicissitudes, died there at the age of eighty.

In 1827, Humboldt settled permanently at Berlin. Here he designed his "Kosmos," which was only begun in 1843, though the conception of it had been in his mind for fifty years. The last volume was finished in 1858, and he worked at the proof sometimes sixteen hours a day : he completed the work on his eighty-ninth birthday, and during the following spring he closed a life eminently successful, yet of which, writing to Froebel, he says, "I live joyless, because of all I have striven for from my youth I have accomplished so little." Nevertheless it was a life of

great and famous labour; and in these times of hungry striving for material wealth and power, it is a lesson worth studying. He was born to rank and fortune, and he sacrificed all to the pursuit of knowledge for its own sake; seeking neither place nor reward, until, in his latter years, the greatest honours were heaped upon him unsolicited. Probably no man ever lived who gave more help to worthy and aspiring youth; he rejected no rational appeal, and his influence was always exerted in behalf of science and its votaries. He expended his fortune in his travels and the publication of his works, and during the closing years of his life depended upon his pension and on the money derived from the sale of his books.

He was buried at Tegel, where his father, mother, and brother rest, after a public ceremonial in the Dom Church of Berlin, which was attended by the court and all persons of distinction in the capital.

IV.

WILLIAM WILBERFORCE.

A GENERATION has run its course since the "Life of William Wilberforce" first issued from the press. We are now indebted to the Bishop of Oxford for a more condensed biography of the Christian warrior whose career forms the subject of this paper. We hope that through the instrumentality of this book there will arise a larger recognition of the work and character of Wilberforce, and a warmer interest in the warfare that he waged against the many forms of vice and suffering which disgrace alike our boasted civilisation and Christianity.

William Wilberforce was born at Hull in 1759. Of a diminutive and weakly frame, he could in after-years feel grateful that he "was not born in less civilised times, when it would have been impossible to rear so delicate a child." His mind, however, was quick and active, and his nature singularly warm and affectionate. At the grammar school at Hull, under the tutelage of the

Milners, he developed an extraordinary talent for elocution. It was customary to place him on a table and make him read aloud, as an example to the other boys. The death of his father in 1768 transferred him to Wimbledon; where his aunt, a disciple of Whitefield, brought him under the influence of her peculiar views, with the result that, in his twelfth year, he had acquired a "rare and pleasing character" for piety. But tidings of his incipient Methodism reached his northern home. His mother was alarmed. She determined to dissipate by change of scene the spiritual feelings which had obtained the mastery in his breast. Almost broken-hearted at the separation, he returned with her to Hull. The habits of society in his native place favoured the designs of his friends. Theatres, balls, card parties, distressing to him at first, soon began to exercise their fascinations, and he became as thoughtless as the rest. His rare skill in singing rendered him an acceptable guest, and much of his time was spent in visits to the neighbouring gentry. The religious impressions he had received were overclouded with careless gaieties, and little promise could now be gleaned of the holy earnestness and fire which afterwards illuminated him. At the age of seventeen, he entered

St. John's College, Cambridge, a very fair scholar. On his arrival, he was introduced to as wild and "licentious a set of fellows as could well be conceived." They drank hard, and their conversation was even worse than their lives. From such companions the better nature of Wilberforce recoiled, and for the last two years of his course, he was the leader of a more refined and intellectual circle. He was a frank and simple host, and a delightful companion. His rooms were always open to his friends. A great Yorkshire pie crowned his table, and wit and mirth and song flowed from his lips continually. He was a good classic, passing his examinations without trouble; but he lived to regret the want of early habits of mental discipline, and the lost opportunities of his university career. In after-life he looked back with unfeigned remorse on those wasted years, relieved by the one bright spot that he had no vicious practice or abandoned principle to cause him shame. His ample fortune, his abilities, his exuberant nature rejoicing in the freshness of youth, all conspired to keep him idle, gay, and thoughtless; and so the days and years flew by unredeemed.

Within a few weeks after the celebration of his

coming of age, Wilberforce started as candidate for his native town; and after a contested election, and the expenditure of 8,000*l.* among the electors of Hull, he found himself their representative in the House of Commons. His great success threw a lustre on his entry into public life. He was warmly received in London: Brookes', Boodle's, and White's opened their arms to him. He passed his evenings at Goosetree's—a club which numbered among its members Pitt, Eliot, and Grenville. Mrs. Sheridan sang old English songs for him angelically. He was himself obliged to sing at Devonshire House for the Prince of Wales. One time dining at Wimbledon with Pitt, another time passing the evening with Mrs. Siddons, and occasionally charming his auditory at St. Stephen's, this favourite child of fortune sailed on the top-most wave of delighted success.

The break-up of Lord Shelburne's Cabinet discharging Mr. Pitt from office, enabled him to accompany Wilberforce and Eliot on a trip to France. After some amusing experiences at Rheims, the three friends entered Paris in October, 1783. The fame of their arrival had already preceded them, and by special invitation they joined the gala festivities of the Court. They dined with

Benjamin Franklin, hunted with Louis XVI., who appeared in immense boots, "a clumsy, strange figure of the hog kind," and supped with the Queen at Fontainebleau. After six weeks of splendid hospitality, Pitt received a sudden summons to oppose Mr. Fox's India Bills, and the party hastened to London. The Coalition Ministry was now unpopular. Public feeling ran high in favour of Mr. Pitt. Addresses poured in to the King in favour of the Opposition. Now it happened that the great northern county was the sheet-anchor of Ministers, and it had not declared itself. Wilberforce hastened down to put himself at the head of the popular party. He arrived suddenly in the castle-yard at York, where the freeholders were assembled. When he began to address them, the grace of his expression, the magic sweetness of his voice, captivated and disarmed opposition. His speech was received with the loudest plaudits. He denounced the Coalition, ridiculed the India Bills, and, as the champion of popular rights, he lashed the great Whig families, who were reported to have Yorkshire in their pockets. "I saw," said Boswell, describing the meeting, "a shrimp mount the table, but as I listened he grew, and grew, until the shrimp

became a whale." Wilberforce's secret scheme was to stand for the county himself. So mad an idea he had told to no one, not even to Pitt. Fortune unexpectedly favoured his intention. He was still speaking, when the admiration of the voters burst forth in the shout, "We'll have this man for our county member! Wilberforce and liberty!" Large subscriptions poured in to defray the expense of a contest, and his aristocratic competitors surrendered to him a seat which he continued to occupy for twenty-eight years. Pitt's words to him were, "I never can congratulate you enough on such glorious success."

Soon after this event Mr. Wilberforce proceeded abroad with some female relatives and Dr. Isaac Milner. The journey was destined to form a remarkable era in his life. In Milner he had a companion of strong sense, and of settled but unobtrusive piety. Beginning with discussions of a purely speculative character, their converse gradually assumed a more intimate and personal tone. More than once the rough philosopher arrested the raillery of his livelier companion, and stirred deeper thoughts than those which for long years had been habitual to him. Hence it arose that in his gayest moments he had sometimes

flashes of an inner light, and questionings which he dared not stifle. Under the guidance of his wise companion he was gently brought to search the Scriptures daily, till the truths to which he had given an intellectual assent became enriched with new and holy meanings. His own guilt and past ingratitude appeared before him in the darkest colours. But he was not left without the calm of assured forgiveness. God entered his thoughts, and his unsatisfied yearnings found a resting-place in the Redeemer, who henceforth became the ever-present companion of his hopes and fears. From that time the current of his life obtained a new direction. Hitherto youth, captivating manners, and genial sympathies had carried him buoyantly on. His aims and hopes were bounded by the narrow limits of the world. He had so much to give away, so much to enjoy, that assuredly he must win something back. But with him these fancies gave way before the advent of a fuller light. His work assumed a deeper significance when regarded as a solemn duty. He determined to "devote himself to Him who had so dearly bought him," to be anxious for the health of his own spiritual nature, and for the advancement of human happiness. The reformation of manners

and the abolition of the slave trade having been selected as his appropriate province, he gave up to the faithful discharge of his self-imposed task every energy of his renovated soul. His mind had early turned its thoughts upon the odious traffic in human flesh, which was sanctioned and upheld by a code of laws professedly Christian. When a boy, he had written on the subject in the public journals. Advancing years had deepened his interest in the cause. He had many qualifications which marked him as a leader in the work—his rich and lofty eloquence, his high political influence, combined with unusual independence; the purity of his aims, the absence of that self-seeking ambition which under a protracted struggle would have sunk exhausted by the way; above all, he approached the struggle in the firm assurance that God had called him to the work, and that God would prosper it in his hands.

During the year 1786, accordingly, Wilberforce prosecuted many enquiries among the West India traders. He met Thomas Clarkson, and eagerly entered into the views of the abolitionists, of whom he was chief. He assured that gentleman on his first interview “that the subject often engaged his thoughts, and was next his heart.” Hitherto the

question had occupied the attention only of philosophers and philanthropists. Societies having for their object the suppression of the traffic existed in England and America among the Quakers. It had been denounced by men of every variety of opinion. Montesquieu, Rousseau, Adam Smith, the Wesleys, Sterne, Cowper, were amongst those who lifted their powerful voices on the side of abolition. The matter was now to be brought before Parliament, and Mr. Wilberforce was chosen to lead the attack. He armed himself for the struggle by long and frequent conferences with Mr. Pitt. Their relations were of the most intimate description. They dined, they walked, they lived together. In the language of an eye-witness, "they were like brothers." Pitt warmly urged his friend forward in the cause which proved the main purpose of his life, and the broad current in which his chief energies were directed. He conceived it to be admirably suited to his character and talents. On May 12, 1789, the question came before the House of Commons. Wilberforce opened with a forcible and eloquent statement of the case for abolition. His speech elicited from Mr. Burke one of those eulogies with which his genius is imperishably associated. The motion

was most ably supported by Pitt, and Fox and the abolitionists recorded their views in twelve resolutions on the journals of the House. The violence and ability of the assault took the planters' party by surprise. They pleaded for delay, and obtained leave to submit evidence in support of their cause at the bar of the House. The examination of witnesses thoroughly answered the expectations of the Guinea merchants. It was prolonged from week to week, and from month to month. Wilberforce was in constant attendance. His acquaintance with the subject, and the habits of self-government which he had acquired, were of the greatest service to him amid the misrepresentations of witnesses and the angry discussions of opposing interests. It was not until the spring of 1791 that the evidence closed, and Mr. Wilberforce was again able to bring the question to a distinct issue in the House of Commons. Many were the assurances of sympathy that he received as he went down to do battle against that traffic in human flesh, which sent up a perpetual cry to Heaven for vengeance. From his dying bed John Wesley wrote to cheer him forward; with his last words he likened the youthful champion to "*Athanasius contra mundum.*" In

his own journal Wilberforce committed himself and the cause to the care and providence of God. "May God bless me in this great work! I look to Him for wisdom and strength, and the power of persuasion." The result justified the tactics of the planters, who had calculated on the subsidence of popular indignation. On May 19 the motion came on, and was defeated, though Pitt, Fox, and all the talents lent it their aid.

And now commenced a long and tedious parliamentary struggle, renewed year by year with varying success, buoying up the party with hope, and again overclouding their prospects with much despondency and doubt.

The two succeeding years brought no relief to the sufferings of the negro. The circumstances of the time were gloomy—the excitement of the revolutionary war filled men's minds, while the advancing tides of French political opinions overawed the thoughtful with vague alarms. The temporising policy of ministers satisfied the national conscience, which was speedily relapsing into a careless indifference. Wilberforce, however, was vigilant at his post, but only to endure the chagrin of three successive defeats. The predominating strength of his adversaries was shown still more

strikingly year after year in the defeat of his annual motion. With the acquisition of new West Indian territory, the trade had acquired increased extent, and its Parliamentary supporters were more deeply concerned in its maintenance. The debate in 1798 was marked by Mr. Canning giving his first open support to abolition, and by the vote and speech of Mr. Windham first upholding the continuance of the slave trade. In Mr. Windham this was a part of the change which had been wrought by his recoil from French principles. When the eighteenth century closed, the contest had lasted eleven years. Warned by his reverses, and hopeless of attaining his end by Parliamentary means, Mr. Wilberforce endeavoured to effect his object by negotiations with the West India proprietors. These efforts proved abortive; and the year 1802 broke darkly on him and the undaunted band that still adhered to his standard. The country was occupied in preparations to resist France, for Napoleon had rudely thrown down the gauntlet in his haughty dismissal of Lord Whitworth; and an army of 500,000 veterans, flushed with victory, lay on the other side of the Channel ready to invade our shores. Men's minds were deeply engaged with the safety of their own homes.

The feebleness of the Addington administration, and the cruel burdens of an excessive taxation, lay heavy as lead on the national heart. The Oxford farmers declared that if Bonaparte came, they could not be worse off than they were. In the universal uneasiness the advocate of the slave preserved an enforced silence, although the prospects of success became more luminous and frequent. Mr. Pitt returned to power in 1804. The dread of Jacobinism no longer shed its terrors over the public mind. The union with Ireland added a host of friends; democracy abroad had assumed the features of military despotism; and the advocacy of revolutionary principles was not so frequently charged as a reproach against the supporters of abolition. Some of the West India body moderated their opposition when they found that by encouraging slavery in newly acquired territory they were raising up a rival commercial interest.

Encouraged by these favourable indications, Mr. Wilberforce moved the first reading of his Bill on the 30th May, 1804. All the Irish members voted with him, and the Bill triumphantly passed through its successive stages. But the House of Lords for the third time refused sanction to the

solemn and deliberate act of the representative chamber, and refused to look with an eye of pity on their suffering fellow-men. The following year Mr. Pitt's majority in the House of Commons had fallen very low. The ill success of the war disheartened him. The language of the Opposition was that Pitt could neither conclude a peace nor wage a successful war. Fearful of dividing his friends, he pressed earnestly the postponement of the slave trade question; but Wilberforce firmly refused to make that holy cause subservient to the interest of party, and brought on the Bill, but only to experience one of those reverses which had so sorely tried his patience. Through the activity of his enemies and the lukewarmness of his friends, a small but adverse majority encountered the Bill on its second reading, and drew from him in his private journals keen expressions of distress and grief. His entry of the following Sunday, a day religiously set apart for meditation, was, "O Lord, pity these children of affliction, and terminate their unequalled wrongs; and O direct and guide me in this important conjuncture." The death of Mr. Pitt paved the way for the passing of the measure. Had he ever imperilled the fortunes of his place on the Slave Trade Abolition Bill, it

must have passed long ago. This he never did. He left it in the hands of a private member, and though he invariably lent his magnificent aid and talents, yet he did it in an unofficial capacity, and divested of the full strength which, as a ministerial measure, it would have possessed.

It is a curious turning-point in the history of this question, that the new Government entered heartily into his schemes. Fox, now in power, the tried and consistent friend of the cause, conciliated the Prince Regent's opposition. Lord Grenville, in the House of Lords, carried two Bills, abolishing the trade with all foreign powers, and forbidding for the future the employment in that traffic of any British shipping; while in the House of Commons, it was resolved that the slave trade was contrary to the principles of justice, humanity, and sound policy, and that immediate steps should be taken for its abolition. That pledge was kept. The death of Fox, who rapidly followed his great rival, did not delay its fulfilment. Early in 1807, the Bill passed a second reading in the Commons. The debate was opened by Lord Howick, and continued by Sir S. Romilly, who "contrasted the feelings of the Emperor of the French, in all his greatness,

with those of that honoured man who would that day lay his head on his pillow, and remember that the slave trade was no more ;” then it was that the whole House, forgetful of its ordinary habits, burst forth into uncontrolled shouts of applause that made the roof ring again. The Bill was sent up to the Lords, and received the royal assent on the 23rd of March. Thus, after nineteen years of toil, Mr. Wilberforce witnessed the success of the object on which he had set his heart. Amidst the warm congratulations of his friends, and the applause of the world, he could but bow in the secret of his own spirit before that gracious Power which had led his labours to a glorious and successful issue. “No selfish exultation disturbed his heartfelt joy. ‘God will bless the country,’ was his prophetic declaration.” Such is a brief sketch of that prolonged war against cruelty and cupidity, undertaken in no ambitious mood, and prosecuted in the face of every opposition which the selfish passions of mankind could bring into activity.

Cordial friendship existed between Pitt and Wilberforce; it survived all the jars of public life, and was of the closest character. Once or twice, under the stress of opposing views, it

quivered in the balance, but the alienation which ensued was of temporary duration. The habitual reserve which Pitt exhibited, even towards friends of long standing, gave way before the charm of Wilberforce's society. While he withheld from those who stood closest to him the inner workings of his mind, he opened all his heart to Eliot and Wilberforce. Wilberforce was not slow to reciprocate the warm feelings with which he was regarded. In the first stirrings of his awakened conscience, it was to Pitt that he unfolded his new experiences. He could not choose but to tell his friend of the feelings and thoughts which were invested with an infinite and imperishable value. But he approached the subject with the diffidence of one on a sudden confused with the irresistible impulses of a new nature. With true affectionateness of disposition, and in the spirit of bright hopefulness which crowns the early years of faith, he longed to draw Pitt into hearty sympathy with his new-found convictions. Long and earnest were the conversations, but to no purpose. Wilberforce's opinion was, as he drew back baffled, that Pitt was too absorbed in politics to give himself time for due reflection on religion.

The public career of Wilberforce was undistin-

guished by office. No efforts of statesmanship are associated with his name. He joined no party, but preserved a position of unassailable independence. His connection, both public and private, and his natural temper, disposed him to an alliance with the policy which is now called Conservative. Yet his conduct was always that of a true reformer. In social sympathies, and by education, he was a Tory. His principles sided with the Liberals, and on many important occasions he recorded his vote against Pitt, and with Fox.

The beginning of the war with France in 1793, first severed the political alliance subsisting between Pitt and Wilberforce. Though he was warm in his denunciations of the revolutionary principles which deluged France, yet he was more alarmed and saddened by the prevailing profligacy of the times, and, above all, by that self-sufficiency and proud and ungrateful forgetfulness of God then so general in the higher ranks of life. The blessings of peace were in his regard of inestimable value. He was unconvinced of the necessity for the war; and in 1794 he spoke in favour of Mr. Grey's motion for peace, and moved an amendment to the Address, recommending a more pacific policy. These acts were attended with painful consequences.

He had to endure the congratulations of Fox, the sarcasms of Windham, his sovereign's averted face—above all, the coldness of Pitt.

Twice only, it is said, was Pitt's sleep broken by the events of his public life: by the mutiny at the Nore, and by the first opposition of his trusted friend.

The impeachment of Lord Melville's integrity again proved a cause of separation between Wilberforce and his closest friends. Pitt defended him, feeling bound in honour to defend one who had long acted with him. It was uncertain what course Wilberforce would take. He himself hesitated. He felt deeply the importance of a high moral standard among public men. He scrutinised with great care the charges, hoping that a good defence might be made. He had to endure before rising that "fascinating eye," at which Erskine quailed, levelled on him with eager enquiring look from the Treasury Bench. His speech was one of the most memorable of his parliamentary utterances, in which the sternest principles of public morality were joined with the tenderest compassion for the faults he condemned. In a subsequent speech on this subject, defending himself from the charge of inconsistency, that he did not join

the deputation which carried the address to the King for the removal of Melville from office, he enunciated the most lofty views of Christian conduct and charity. "I should have thought," he said, "that men's own feelings might have suggested to them, that it was a case in which the heart might be permitted to give a lesson to the judgment. . . . When the sentence of the law is passed, am I to join in the execution of it? Is it to be expected of me that I am to stifle the natural feelings of the heart, and not even to shed a tear over the sentence I am pronouncing? I know not what Spartan virtue or stoical pride might require; but I know that I am taught a different lesson, and a better lesson, by a Greater than either Lycurgus or Zeno. Christianity enforces no such sacrifice; she requires us, indeed, to do justice, but to love mercy. I learn in her school not to triumph over a conquered enemy; and must I triumph over a fallen friend?"

A year before Melville died, Wilberforce came upon him by accident. It was in the stone passage under the Horse Guards. The light struck suddenly on their faces. Wilberforce thought he was passing on, but he stopped and cried, "Ah,

Wilberforce, how do you do?" and gave him a hearty shake of the hand. Wilberforce says, "I would have given a thousand pounds for that shake!" He never saw him afterwards.

Pitt felt the disgrace of Melville keenly. It inflicted a mortal wound, which led to his premature death. His war policy proved unsuccessful abroad. The capitulation of Ulm, and the terrible defeat of the Allies at Austerlitz, fell with crushing weight upon him. His health broke down. His food ceased to nourish him. All who met him saw misery written on his face. His peculiar look was often pathetically described by Wilberforce, who used to call it the Austerlitz look. On January 23rd, 1806, he died of a broken heart. A splendid train of nobles and princes followed the funeral car which bore him to his last home in the north transept of the great Abbey. Wilberforce, who carried the banner before the hearse, described the awful ceremony with deep feeling. "As the coffin descended into the earth," he said, "the eagle face of Chatham from above looked down with consternation into the dark house which was receiving all that remained of so much power and glory."

Although Mr. Wilberforce's name is chiefly

associated with the abolition of the slave trade, to which his highest energies were devoted, yet he took part in every memorable debate during forty-five years. He supported Catholic emancipation, wrestled against Parliamentary corruption, made determined efforts in the cause of Christianity in India, and opposed the admission of Chief Justice Ellenborough into the Cabinet as an innovation of the Constitution. His zeal for morality stimulated him to zealous measures for diminishing the number of oaths, for the abolition of lotteries, and for rescuing the Day of Rest from profanation. The current of public affairs, as it hurried by, was tinged by him with the warm colouring of a mind aglow with love and thoughtfulness for others. His voice and vote were never lent to party. The apparent contradictions of his Parliamentary career were the contradictions that belong alone to the unfettered judgment. Inconsistencies there were, but they were the natural development of a free determination, acting, not under the control of strict rules, but in subjection to the living principles of right, freely interpreted and freely considered as occasion arose. His influence in the House of Commons was second only to that of the leaders.

His freedom from bitterness or party spirit gave great weight to his decision. Moreover, his guileless character, the confidence reposed in him by religious bodies of all persuasions, his representation of the great northern county, and his intimacy with Pitt, contributed to magnify the value of whatever fell from his lips. He had about him the sparkle and freshness of eternal youth. "Life he touched at all points," is the testimony of Sir J. Mackintosh; "and this," he adds, "is the more remarkable in a man who was supposed to live absorbed in the contemplation of a future state." The most instructive feature in his oratorical displays was the close union between the most rigid principles and a playfulness and gaiety of disposition which the slow advance of years could not alter or dissipate. It was essentially in him a moral power that took the place of genius. He persuaded men not so much by the weight of his intellect or the cogency of his logic, as by the earnestness of soul and thorough conviction which rose above all the resources of art. It is true that, to the student of history, his speeches will seem tame, undeserving of the great applause with which they were received. But his success as a speaker was mainly due to

the dramatic character of his mind. His graceful gesture; the full liquid tones of his voice, proceeding from an attenuated frame, as it attuned itself to exquisite harmony with the thoughts to which it gave expression; his eyes, beaming with bright intelligence and cordial kindness; the earnest indignation with which he denounced the cruelty of man, and the tones of lingering tenderness in which he pleaded for the oppressed, lent a charm and a richness to words which, under other circumstances, might have passed as commonplace.

But although the House of Commons was the chief theatre of Mr. Wilberforce's philanthropic energy, yet his exertions found a wider sphere out of doors. It may in truth be said that there was no object which his own ingenuity or that of others could propose, calling for help or sympathy, which did not engage his attention. Though hidden to the eye of those who moved in the gay and thoughtless ranks of high life, he had detected the coming conflict between the two extremes of English society—between a selfish moneyed class on the one hand, and squalor, poverty, and ignorance on the other—between the denizens of crowded, pent-up dwellings, and the more fortu-

nate inhabitants of well-appointed palaces. To meet the storm, he addressed himself to the study of social economics. He gathered to his side a large and goodly band of helpers, who were sent forth as almoners and evangelists to their more destitute brethren. The schemes of benevolence of which he was the inspirer and sustainer, branched forth through the country till they filled the land, and spread their sheltering arms over the most neglected and distant regions of the earth. In 1804, while the air was full of the din of arms, he formed, with the aid of a few friends who met by candlelight, the Bible Society. Little did it then promise—"the smallest of all seeds"—when planted, to grow to such an eminent stature among the trees of the forest. M. Esquiros, in his interesting book on our religious life, records that, by the aid of this society, the Bible has been put forth in 207 different languages, and forty-six million copies of the Holy Scriptures have passed into circulation.

Convinced of the absolute necessity of an organ of opinion to combat the vices, both speculative and practical, of the religious world, on the 1st of January, 1801, with the help of the Thorntons, he launched the first number of the *Christian*

Observer, a periodical to whose pages he was a steady contributor. For many years he gave away a third or fourth of his income to charity. His house was the common resort of all who needed help or advice. There were deputations expecting an audience, missionaries from India and America, Quakers who had been the first to protest against the slave trade, Dissenting clergymen with petitions to present, all mixing together in his drawing-room, and moving amongst them "Mendicity" Martin, so called from the prominent part he played among the institutions which owed their existence and success to the little figure that soon came gliding in among the throng, and passed from group to group with kindly words of encouragement and advice, diffusing around him the serenity and sunshine which he perpetually enjoyed.

Advancing years and declining strength convinced Mr. Wilberforce of the duty of retiring from the representation of Yorkshire. For twelve years he was member for Bramber, a small borough, till his final retirement to private life in 1824. His last appearance in the House was fittingly celebrated by a characteristic speech, in which he denounced the inaction of the British Parliament in not freeing the West India slaves. His last

words were: "It is with reluctance and pain that I come forward, but I esteem it my bounden duty to protest against the policy on which we are now acting. 'Liberavi animam meam.'" Leaving the great legacy of his unaccomplished work to Brougham, Mackintosh, Buxton, and other friends of freedom, he went down to a life of quietness and rest, and happy usefulness, and with earnest longing in the years that yet remained to walk more in the fear of the Lord, and the comfort of the Holy Ghost.

He purchased a freehold residence at Highwood Hill, just beyond the disc of the metropolis. His days at Highwood were regularly spent. The first morning hours were given to reading and to prayer; soon he went forth to his garden to hear the singing of the thrushes in the copse, and to admire the loveliness of flowers which spake to him of a fairer and more abiding beauty. With his defective education, he had scant knowledge of scientific truth, but his was the poet's rapture, "contented if he might enjoy the things which others understood." The stars of heaven were dear to him, because his Father's hand had made them. When an old man, he viewed them with the fresh, wondering look of youth. Breakfast followed, animated by his un-

wearied powers of conversation and the society of congenial friends. Then he went till post time to his study, and to pace his garden once again, and to hover from bed to bed over his favourite flowers. He dined at five, and then lay down to rest, to rise for a new term of existence, and to charm both old and young as he passed from one bright thought to another, and threw around them all the peculiar sunshine of a mind perpetually tuned to love and praise. Before retiring to rest, he would often seek, in the natural objects around him, to be again assured of his Father's love and presence. "I was walking with him," says a friend, "in a verandah, watching for the opening of a night-blowing cereus. As we stood in eager expectation, it suddenly burst wide open before us. 'It reminds me,' said he, 'of the dispensations of Divine Providence first breaking on the glorified eye, when they shall fully unfold, and appear as beautiful as they are complete.'" Signs of thankfulness to God and love to man marked every halt upon the road. His diary is full of secret aspirations after greater holiness. As the shadows of life lengthened on his way, his faith and confidence in God acquired a greater strength. The Psalms became his chief study and delight. He stood from day to day on the Delec-

table Mountains, and filled his spirit with the view of the fair land that lay beyond the Jordan that flowed between. And, for one who had so largely mixed in public life and public work, it was rare to have a soul so unspotted from the world. He had no promptings to revolt, no blasé feeling, no sense of capricious dealing. When he numbered up God's mercies to him, it filled him with wondering love and awe.

The end of his pilgrimage was now drawing near, and with gradual and gentle steps he descended into the valley of death to cross to the unimagined scenes beyond. The last public news that he received, was the information that the Bill for the Abolition of Slavery was read for a second time in the House of Commons. "Thank God," said he, "that I should have lived to witness a day in which England is willing to give twenty millions sterling for the abolition of slavery." With quiet composure, in the spirit, that he loved, of childlike faith, he watched the sinking of the sands of life, fearing no evil and leaning on the staff of his heavenly Friend. After a short illness, accompanied with little bodily suffering, but with great weakness, and full of the hopes of faith, whose power he had so copiously illustrated and testified to, his spirit passed to God

who gave it. That was on July 29, 1833. He had lived seventy-three years and eleven months. As soon as his death became known, a requisition was signed by the most eminent members of the two Houses, earnestly requesting that his remains should lie in Westminster Abbey. And thither, attended by all most celebrated in rank and genius, and earthly glory, his funeral car was borne; and while the great anthem rolled along the vaulted roof of the solemn minster, his dust was lowered to its last resting-place in the northern transept beside the body of his friend, whose shattered frame and broken heart were twenty-seven years before deposited in the same hallowed spot.

V.

MICHAEL FARADAY.

IT was towards the latter half of the year 1791, that Michael Faraday saw the light. He was born of obscure parents, his father earning his livelihood as a common blacksmith; but there dwelt within him that true genius which, destined to shine, cannot be hid by the accidents of birth or education. At the age of thirteen he was apprenticed to a bookseller and bookbinder near Manchester Square, London. Here the natural bias of his mind first showed itself. Amongst the books possessed by his master were certain portions of the *Encyclopædia Britannica* containing articles on electricity, as also Mrs. Marcet's "Conversations on Chemistry." These, during the intervals of business, Faraday read with avidity. His imagination, which delighted in the wild stories of the "Arabian Nights," and his bright practical disposition, which longed for active employment, seemed to find each their common home in the land of experimental science. The more eagerly



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he pursued these studies, the more distasteful became his occupation as apprentice, until, unable to bear any longer this severance between the wishes of his heart and the duties of his life, he wrote to Sir Humphry Davy, whose lectures at the Royal Institution he had been attending, expressing his delight in the study of science and his hatred to trade, and asking the great man for aid in this dilemma. The result of this letter was an interview, and the result of the interview was the establishment of Faraday in the Royal Institution as assistant to Sir Humphry Davy (1813). So it was that the desire of his heart was accomplished. Under a kind and genial master his mind developed itself. For four years he worked steadily, laying up a store of practical knowledge, and in 1816 he sent forth his first contribution to the literature of science. From this time until old age prostrated his powers he continued at close and successive intervals to publish the result of his experiments, till there was hardly a portion of the large field of physical science which had not received the illumination of his genius.

The mind of Faraday eminently fitted him to be a discoverer: he possessed qualities rarely found in combination. The intuitive glance which sees the

truth before it is proved, and the steady caution which refuses to rest content with a truth thus found until it has been carefully demonstrated, were both his. He worked out for himself the experiments of previous discoverers, so that he might not build upon what he had not personally proved; and it was often while thus tracing out the footsteps of other men, that the light of some new thought flashed upon him. This then became the object of his untiring pursuit; until he had proved it true or false, he would never rest.

Amongst his numerous discoveries there are three which stand out prominently, any one of which would have marked him as a great man. These are—1. Magneto-electric induction; 2. The law of definite electro-chemical decomposition; 3. Diamagnetism. It is our purpose to give a brief sketch of each of these, and to mark through them Faraday's scientific position with regard to the past and present. And first with regard to magneto-electric induction. Oersted, Professor of Physics in Copenhagen, made a discovery in the year 1819 which opened out a new field for electrical research. Before his time, magnetism and electricity were considered as distinct and separate forces: he proved that they had not only a point

of contact, but also an intimate connection the one with the other. He suspended a copper wire horizontally over a movable magnetic needle, and in the direction of the magnetic meridian,* and having sent a current of electricity through the wire, found that the needle immediately deviated from its natural position. That electricity could exert an influence over magnetism, was thus made an established fact. Ampère seized upon this discovery, and developed it. Under the inspiration of his touch there sprang from it the vast fabric of electro-magnetism. After numerous experiments, he finally succeeded in imparting to wires transmitting electric currents all the properties of common magnets. From these discoveries arose his famous theory of magnetism, which, because of its capability of explaining all known magnetic phenomena, is the theory generally received at the present day. It declares that around the particles of bodies capable of magnetism, electric currents are continually circulating: before magnetisation, these currents traverse the bodies in all directions and mutually destroy one another; after magnetisation, a fixed direction is given to them. They

* The direction which a magnetic needle assumes in a given place when freely suspended, is the magnetic meridian of the place.

are all made to circulate in planes parallel to one another, and the result is, that as there is no destruction of one current by another, the magnetism of the bodies appears. In order to explain on this theory the magnetic effects of the earth, the existence of electric currents is assumed which continually pass round our globe from east to west in planes perpendicular to the magnetic meridian. Barlow performed a beautiful experiment to illustrate the validity of this supposition. He constructed a hollow sphere of wood, over the surface of which electric currents were made to circulate, as the theory presumes they do over the earth's surface; then, by placing a little magnet at different positions on his sphere, he found he could exactly imitate all the phenomena of the earth's magnetism. Magnetism having been thus proved to arise out of electric action, the conclusion seemed irresistible that electricity should also be derived from magnetism. So thought Ampère, and for many years he sought to verify this belief, but all his attempts failed. Eleven years passed away, and still Nature seemed to deny what Theory pointed out as true; but in 1831 the perseverance of Faraday, who had given his whole mind to this subject, was crowned with success; that which

had baffled Ampère and others for so long was made clear by his more extended observations. He thrust a very powerful permanent steel magnet into a coil of wire, the extremities of which were connected with a galvanometer* to indicate the presence of electricity. A rush of electricity in the coil followed upon the insertion of the magnet; an equal rush in an opposite direction followed upon its withdrawal. Ampère and others had expected the magnet to exert its influence while it lay close to the wire, and therefore had not investigated the phenomena consequent on its approach or withdrawal. Faraday expected nothing; he felt his duty to be, to interrogate Nature; and as he brought a mind to meet her replies altogether free from preconceived notions, it was to him that she unfolded her secrets. These momentary displays of electricity caused by the presence of the magnet were called by Faraday *induced currents*, and they gave a lucid explanation to a phenomenon observed by Arago in the year 1824, which had been hitherto utterly inexplicable. The philosopher had remarked that a

* The name *galvanometer* is given to a very delicate apparatus, by which a magnetic needle is so placed as to determine with the minutest accuracy the existence, direction, and intensity of electric currents.

magnet freely suspended over a disc of non-magnetic metal followed the revolution of this disc, stopped when it stopped, revolved when it revolved. Here, thought Faraday, my currents must come into play, as the several portions of the disc come under the influence of the magnet; and these currents reacting upon the magnet must, by the laws which regulate the action of currents upon currents, make it revolve with the disc. All this he verified by experiment. Then, generalising, he gave expression to an idea, the depths of which we have not as yet sounded. Are not the conducting matters upon the earth's crust similarly affected by the earth's diurnal revolution, so as to induce in it electric currents? This electricity of Faraday's, generated from magnetism, has been productive of the most useful results. It is the electricity which is almost exclusively employed for medical purposes. It is electricity which shines from so many of our lighthouses with a brilliancy which can pierce through the densest fog. Such are some of the practical fruits of this branch of Faraday's labours; and with our enjoyment of their use should be associated a feeling of deep and thankful reverence to the great mind which gave them to us.

The next researches of Faraday led him into the region of chemistry. The most of the electricity used at the present day for experimental and utilitarian purposes, is derived from chemical action. The following is a simple case in which this may be seen. If a plate of zinc and a plate of copper be partially immersed in diluted sulphuric acid, chemical action immediately takes place ; the result of this is, that a slight appearance of electricity manifests itself at once upon both plates, that on the zinc being negative electricity, and that on the copper being positive. Now, if the upper portions of these plates be connected together by means of a metallic wire, this being a conductor, the opposite electricities must, of course, discharge themselves through it ; and as the chemical action upon the plates is for a certain time constant, so must the discharges be in the wire. Thus a continuous presence of electricity is produced in the wire. This has received the name of *current electricity*. The direction and very existence of the current is due to the difference between the power of the discharges ; therefore it is always necessary that the chemical action upon one plate be greater than that upon the other, and the greater the difference the greater

the intensity of the current. If the wire connecting the plates be severed, it is clear that the opposite electricities will tend to accumulate at each of its ends. These ends are called *the poles of the couple*. In 1800 Carlisle and Nicholson discovered that electric currents could decompose water into its constituent parts, hydrogen and oxygen. They placed the poles of a couple in a vessel filled with water and sent a current of electricity through them, and the water was at once decomposed. This fact once known, it was not long before many other substances believed to be elements were discovered to be compound. Many alkalies and earths were decomposed, and chemistry was enriched with two new metallic bodies, potassium and sodium. Faraday added method to all these facts, and brought them under the reign of law. He began his work by proposing that new names should be given to these new effects of electricity, lest the notions which cling to old words should impede the mind's unbiassed research after truth : accordingly he got rid of the term *pole*,* and substituted for it the neutral term *electrode* (i.e.,

* The term *pole* carries with it a notion of repulsion and attraction. This notion has no proper existence in electrolysis, where the pole is merely the door or passage by which the electricity passes in and out of the body under decomposition.

way of electricity); all substances capable of decomposition he called *electrolytes* (i.e., freed by electricity), and the process of decomposition itself, *electrolysis*. He found that this process could not take place in any but conducting bodies; hence it is that ice is not decomposed by the battery, because it is a bad conductor; and that other substances, such as oxide of lead and chloride of sodium, are only decomposed in a fused state—that is, when they can conduct the electrical current.

Having thus established the laws defining the circumstances under which electrolysis can take place, he then sought out the laws which ruled it when it did take place. At the threshold of this investigation the question which presented itself to him, and demanded a reply, was, What is the thing in the current upon which this decomposing power depends? This he answered by a series of exhaustive experiments. He tried electrodes of various sizes, and found that, no matter how he varied them, there was no difference in the decomposing power; he then varied the strength of the sulphuric acid, and found no difference. It remained, therefore, that the power of the current to decompose any substance depended solely on

the quantity of electricity which passed through it. The chemical decomposition and amount of electricity in an electrolyte having been thus proved proportional terms, it followed that, given one of these, the other could be determined. It is upon this principle that Faraday's famous voltmeter or measurer of electricity depends, in which the intensity of a current is ascertained from the quantity of water which it decomposes in a given time. Thus Faraday beheld chemistry and electricity working amicably together; but he traced deeper the bond of union between them. One of the three great laws upon which the whole study of chemistry as a science depends, is that which declares the composition of all bodies to be fixed and invariable. A compound substance, so long as it retains its characteristic properties, always consists of the same elements united together in the same proportion; sulphuric acid, for instance, is always composed of sulphur and oxygen, in the ratio of sixteen parts of the former to twenty-four of the latter: no other elements can form it, nor can it be produced by its own elements in any other proportion. Water in like manner is formed of one part of hydrogen and eight of oxygen; and were these elements to meet in any

other proportion, something different from water would be the product. These unvarying proportions in which the elements unite to form compound substances, when expressed numerically, give what are called the *chemical equivalents* of the elements; for instance, the chemical equivalent of oxygen is 8, of sulphur 16.

Now, Faraday placed many electrolytes under the influence of his current, but he always found that (the quantity of electricity passing through them and the time of its action being constant) the current decomposed them all in proportions expressed by their chemical equivalents. He tested in every way this conclusion, but from every experiment he recognised the same truth. This is the law of definite electro-chemical decomposition—a law eminently suggestive to the scientific minds of the present age, which have made such rapid advance towards the experimental proof of that which long since they must have held as true, namely, that the amount of force in nature is a uniform and constant quantity, exhibiting itself in diverse forms and ways according to the circumstances under which it acts. There must be a close relationship between the chemical force of affinity which can draw together the par-

ticles of bodies only in certain definite proportions, and that electrical force which can tear them asunder only in the same proportion.

The intimacy of chemistry and electricity having thus exhibited itself to Faraday's mind, no wonder that when he was called upon to take part in the great scientific contest which was waging throughout Europe at this time as to the source of power in the voltaic pile, he at once declared it due to chemical effects. Volta and others believed it to arise from the contact of dissimilar metals; but Faraday, in a paper to the Royal Society in the year 1834, waged a stern warfare against this notion. He showed that currents could be generated without metallic contact, but in no case under circumstances where chemical action was impossible. He declared that to ascribe the forcible current produced by the voltaic pile to the mere contact of dissimilar metals, was to say, "that it could arise out of nothing, that without any change in the acting matter, or the consumption of any generating force, a current could be produced which shall go on for ever against a constant resistance, or only be stopped, as in the voltaic trough, by the ruins which its exertion has heaped up in its own course: which would indeed be a creation of

power, and like no other force in nature." But all this made little impression upon the supporters of the contact theory. It was an old theory, supported by great names—to oppose it was presumption, if not ignorance, so thought the conservatism of his age; nevertheless, the truth prevailed in the end, and there are few men now of any note who *could* hold the contact theory.

We have now come to the third group of Faraday's discoveries. It was while investigating the ordinary phenomena of magnetism that the light of these new truths first shone upon him. Faraday firmly believed in the exhaustless nature and infinite extent of all physical laws; he therefore tried to carry them beyond the circumstances in which they were first observed, or in which they were usually active, and he never gave up his attempt until he had made them work with the greatest intensity possible. It was this characteristic of his experimental genius which led to the present group of discoveries.

Certain Continental philosophers before his time had observed that magnets exercised a repulsive influence on one or two substances: this was an isolated fact, and it remained in an unproductive sleep until Faraday, unaware of its previous dis-

covery, proved it for himself. Having submitted a piece of his famous heavy glass to the influence of one of the most powerful magnets he could make, he found it was repulsed. This was a new thing to him, and in his hands it expanded itself into a general law. He submitted bodies of the most various kinds to the influence of his great magnet—mineral salts, alkalies, acids, bismuth, antimony, zinc, tin, &c., and found that all gave more or less evidence of a susceptibility to its presence. The bodies which were attracted were classed with the usual magnetic substances; those which were repelled, Faraday called *diamagnetics*. But he did not stop here; he examined the effect of his magnet upon flames of various descriptions, and found that they were all diamagnetic. From flames he passed to gases. He allowed gases of various kinds mixed with a small quantity of a visible vapour to ascend between the two poles of his magnet, while he observed their deflections from the vertical line. In this way he found that oxygen was magnetic, nitrogen slightly diamagnetic, and hydrogen most diamagnetic. With the knowledge of this fact sprang up the question, What is the effect of the immense store of magnetic influence which must be in the atmosphere,

composed as it is almost entirely of oxygen? Let us hear his own words upon this subject. "It is hardly necessary," he writes, "for me to say here that this oxygen cannot exist in the atmosphere, exerting such a remarkable and high amount of magnetic force without having a most important influence on the disposition of the magnetism of the earth, as a planet; especially if it be remembered that its magnetic condition is greatly altered by variations of its density, and by variations of its temperature. I think I see here the real cause of many of the variations of that force, which have been and are now so carefully watched on different parts of the surface of the globe. The daily variation and the annual variation both seem likely to come under it. If such expectations be confirmed, and the influence of the atmosphere be found able to produce results like these, then we shall probably find a new relation between the aurora borealis and the magnetism of the earth, namely, a relation established, more or less, through the air itself in connection with the space above it; and even magnetic relations and variations which are not as yet suspected, may be suggested and rendered manifest and measurable, in the further develop-

ment of what I will venture to call *Atmospheric Magnetism*. I may be over sanguine in these expectations, but as yet I am sustained in them by the apparent reality, simplicity, and sufficiency of the cause assumed, as it at present appears to my mind." Thus Faraday saw the force of magnetism travelling beyond the prescribed limits in which it originally dwelt into a region almost boundless. Before his discoveries its influence had been very limited, exerting itself only over a few substances; but under the magic of his touch all bodies in nature expressed their feelings regarding it. There was no neutrality—attraction or repulsion was the general law.

In all these discoveries of Faraday we see a mind which loved to ascend to the highest points of speculation, but one at the same time so active, so little given to baseless dreams, that unless these high thoughts could take some practical form (imperfect as it necessarily was), they were religiously abandoned.

We shall close this brief sketch with one or two of these speculations. They are so lofty, and breathe so much of the calm atmosphere of eternal law, that besides the intellectual interest they excite in us, there is a poetry about them which adds to

them an indefinite charm. It was a favourite experiment of Faraday to shake iron filings over a magnet, and watch them arranging themselves in lines along it. This was to him, as he said, "a representative idea." The subtle immaterial force of magnetism seemed through its arrangement of the iron filings to be crystallising itself out for his observation. This experiment, frequently repeated, suggested to him the idea of lines of magnetic force existing in the magnet, and beyond it through space. The position of the iron filings was to him the evidence of the presence of this linear force; but to a mind like his, penetrated with the belief that all the forces of nature were akin to one another, such an idea had not long to wait for its expansion. May not this be the way in which all force acts? was the question which at once assailed him. May not gravity itself act in lines across space, and may not the tremulous motion of these lines be the cause of light and radiant heat? "This notion," says he, "as far as it is admitted, will dispense with the ether which in another view is supposed to be the medium in which the vibrations of light and radiant heat take place." That there was some medium by means of which bodies at a distance influenced one another, Faraday firmly

believed. He differed from other physicists in ascribing all electrical action to the intervention of material particles. He disbelieved altogether in the notion of inter-atomic space. He sought to penetrate into the very constitution of bodies, and to see particle touching particle within them, and the electric current passing from one to the other not by a forward motion, but by an influence, positive electricity calling up its opposite, negative electricity, and negative its opposite, positive, and so on.

These speculations of Faraday helped him on his road to new discoveries. They show to us the largeness of his mind, and the lofty scientific ideal which he held before it; but he never permitted them to prejudice or bias him in his practical work. When he resorted to experiments, all such ideas were carefully placed in the background, so that with a free unoccupied mind he might listen to the voice of nature. These speculations were amongst the last bright rays of Faraday's genius. It was not long before the weariness of intense labour and work seized upon him. He did not resist these intimations of approaching age; he gradually relinquished the studies which were becoming too arduous for him, but the fire of his love for

them never burned low. You could always awaken his interest in them to the very last. Having thus done his life's work nobly and well, he fell asleep peacefully at Hampton Court in the year 1867.

No one who reads Professor Tyndall's book on "Faraday as a Discoverer," to which the writer of this article is indebted for his materials, can fail to be struck—not only from the incidental notices which he quotes of this discoverer's writings, but also from the suggestive hints which he himself gives of his character—with the deeply spiritual tone of mind which Faraday's intense love of Nature seems to have bred within him. His life was altogether devoted to the contemplation of Nature. He studied her laws, not because it was his profession to do so, but because he was filled with an uncontrollable desire, which would never let him rest unless he was so occupied. We know no lines better calculated to express the effect which such a life must have had upon the spiritual portion of a nature like Faraday's than the following, composed by one who was the very priest of Nature's inner life :—

"The man

Who, in this spirit, communes with the forms
Of nature; who with understanding heart
Doth know and love such objects as excite

No morbid passions, no disquietude,
No vengeance, and no hatred, needs must feel
So deeply, that, unsatisfied with aught
Less pure and exquisite, he cannot choose
But seek for objects of a kindred love
In fellow-natures and a kindred joy.
Accordingly, he by degrees perceives
His feelings of aversion softened down,
A holy tenderness pervade his frame.
His sanity of reason not impaired,
Say rather, all his thoughts now flowing clear,
From a clear fountain flowing, he looks round
And seeks for good, and finds the good he seeks,
Until abhorrence and contempt are things
He only knows by name ; and if he hear
From other mouths the language which they speak
He is compassionate ; and has no thought,
No feeling, which can overcome his love."

VI.

SIR WALTER SCOTT.

FORTY years ago there was no man in Great Britain so popular as Sir Walter Scott. Over Europe, too, his name was like a household word, and in distant English colonies the poems and the tales of the great magician were a familiar literature. It would be interesting to learn the secret of this unparalleled popularity, and we think it may be discovered in the biography of the poet.

Walter Scott was among the first of that famous band of authors who adorned our literature at the commencement of this century. When he published his "Lay of the Last Minstrel," he had noble rivals in the field of poetry; but they were as yet scarcely known, and not one of them, with the exception of Lord Byron, ever approached Scott in popular favour. There was a greater poet than either Scott or Byron living among the Cumberland mountains; but Wordsworth's greatness was not of a kind to obtain speedy recognition; and, despite the exquisite music of Coleridge,

the sonorous dignity of Southey, and the classic purity of Rogers, Scott had scarcely a competitor when he entered the lists of authorship.

Walter Scott, like Southey, has written a brief and characteristic autobiography. He came of a good ancestry, and was proud to tell that he was lineally descended from an ancient chieftain of the same name, commonly called in tradition Auld Watt, of Harden. The character of his father, also Walter Scott, has been beautifully drawn in the tale of "Red Gauntlet." He was by profession a lawyer, or, to use the term employed in Scotland, a writer to the Signet—an earnest Christian of the Scotch type, with ability which raised him to eminence in his profession, but with the simplicity of a child. "Most attorneys," writes his son, "have been suspected, more or less justly, of making their own fortune at the expense of their clients. My father's fate was to vindicate his calling from the stain in one instance, for in many cases his clients contrived to ease him of considerable sums." Of Scott's mother we hear little beyond the statements that she was the daughter of an eminent physician, and came of a family "which produced many distinguished warriors during the Middle Ages, and which for

antiquity and honourable alliances may rank with any in Britain."

Walter, one of a family of twelve, was born at Edinburgh, August 15, 1771. Before he was two years old, the child, after suffering severely from cutting teeth, lost the use of his right leg. Every possible remedy was applied, but to no purpose; and it was at length advised that the infant should be sent into the country, and he was, therefore, taken to Sandy-Knowe, a farm belonging to his grandfather. "Among the odd remedies," says Sir Walter, "recurred to to aid my lameness, some one had recommended, that so often as a sheep was killed for the use of the family, I should be stripped and swathed up in the skin, warm as it was flayed from the carcase of the animal. In this Tartar-like habiliment, I well remember lying upon the floor of the little parlour in the farmhouse, while my grandfather, a venerable old man, with white hair, used every excitement to make me try to crawl." If the child did not recover by the use of this curious prescription, the fresh country air soon produced a palpable change, not only in the limb, but in his general health. Scott grew up slightly lame, but he gained a sound constitution from this life at Sandy-

Knowe among the hills, and there is no doubt that he also received from it his first poetic impulses. The young ewe-milkers used to carry him on their backs among the crags; and in his old age the poet, visiting the spot so familiar in his childhood, related how when an infant he delighted in rolling about all day long in the midst of the flock, and how "the sort of fellowship he thus formed with the sheep and lambs had impressed his mind with a degree of affectionate feeling towards them which had lasted through life."

As the child grew older, other sources of interest arose. He listened with eagerness to tales of border forays; he became the joyful possessor of ballads and story-books; he read Shakespeare, and was charmed, as every poet since Spenser's age has been, with the wonders of the "Faerie Queene." "The child is father of the man." The pleasures and aspirations of the boy were developed and strengthened in early manhood. Scott gained a fair amount of instruction in the High School of Edinburgh. Latin he could read with ease, although not with critical nicety; but he records with grief what he considered his obstinate neglect of Greek, and observed at the height of his fame that he would give half the reputation

he had acquired if by so doing he “could rest the remaining part upon a solid foundation of learning and science.”

Walter Scott was at all times the most modest of men when speaking of his own merits ; but it is certain that in his youth he was an indefatigable student, and rapidly gained no ordinary store of knowledge. Thus we hear of his acquaintance with Spanish and Italian, with French and German ; and he has himself acknowledged that for four years he laboured with the utmost assiduity while preparing for the Bar. At this time he would frequently spend the whole night in study. He formed a wiser plan afterwards, and, like a celebrated living writer, “broke the neck of the day’s work” in the early morning hours.

Scott’s nature was on one side of it eminently sagacious and practical. He was born a Scotchman ; but he was also born a poet. When in the Session House at Edinburgh, he would enter with legal acuteness into the dry details of his profession ; but his heart at other times was more with the past than with the present. Walter had a dreamy way of wandering about the country, much to his father’s annoyance, who protested he was born to be a pedlar. Nature was very dear to

him; but he loved best those scenes—and they abound in the lowlands of Scotland—which are associated with the events of history. “To me,” he says, “the wandering over the field of Bannockburn was the source of more exquisite pleasure than gazing upon the celebrated landscape from the battlements of Stirling Castle.”

While studying in his father's office, and afterwards when he wore the advocate's gown, Scott had for his friends and acquaintances a number of young men of distinguished ability. By every one he was welcomed for his great social qualities, his kindly genial nature, his fund of anecdote, his sincerity and heartiness. Sometimes, after the fashion sixty years ago, conviviality was carried to excess; but, even in the ardent days of youth, Scott had an instinctive delicacy about him which made him recoil with disgust from vulgar debaucheries. Like Milton at the same age, he was preserved from vice by a high sense of honour, and by a “free and gentle spirit.”

In the perilous days of early manhood, Scott had formed an ardent attachment to a young lady whose prospects in life were superior to his own. Their acquaintance, which commenced in a rather romantic fashion—for Scott offered the beauty an

umbrella one Sunday on coming out of the Greyfriars Church—appears to have soon ripened into love. The bright dream, however, although nourished for several years, was never realised. The lady married a Scotch baronet, and the poet was left to choose another mate. In the summer of 1797 Scott visited the English lakes, and there, at Gilsland Spa, which is still a fashionable watering-place, he met his future wife, the daughter of a French royalist. “Without the features of a regular beauty, she was rich in personal attractions; a form that was fashioned as light as a fay’s; a complexion of the clearest and lightest olive; eyes large, deep-set, and dazzling, of the finest Italian brown, and a profusion of silken tresses, black as the raven’s wing; her address hovering between the reserve of a pretty young Englishwoman who has not mingled largely in general society, and a certain natural archness and gaiety that suited well with the accompaniment of a French accent.” Miss Carpenter’s attractions were not all external, for Scott, who writes to his mother informing her of the engagement, says, “Her temper is sweet and cheerful, her understanding good, and, what I know will give you pleasure, her principles of religion very

serious." They were married on December 24, 1797.

Walter Scott was at this time a poor man, but with good prospects of rising in his profession. His wife had some property, however, and they were content to live for awhile in a simple, homely fashion. There are some pleasant records extant of their early married life, and of happy days spent at Lasswade, where Scott rented a cottage. "It is a small house," says Mr. Lockhart, "with but one room of good dimensions, which Mrs. Scott's taste set off to advantage at a very humble cost, a paddock or two, and a garden (commanding a most beautiful view), in which Scott delighted to train his flowers and creepers. Never (I have heard him say) was he prouder of his handiwork than when he had completed the fashioning of a rustic archway, now overgrown with hoary ivy, by way of ornament to the entrance from the Edinburgh-road."

In 1799, Scott was appointed Sheriff of Selkirkshire, with a salary of 300*l.* per annum. The duties of the office were light, and did not interfere with the poet's literary pursuits. Much of his leisure time was spent in collecting Border ballads; and in this work he was assisted by the celebrated

John Leyden, who in one instance actually walked nearly a hundred miles to obtain an ancient ballad, of which his friend only possessed a fragment. In 1802 two volumes of the "Border Minstrelsy" were published, and this work, together with some fine translations from the German, brought Scott's name into notice amongst men of letters. It was not until the publication, three years afterwards, of the "Lay of the Last Minstrel," that he won the favour of the public. The success of this poem was wonderful. The fresh vivid descriptions, the weird-like phantasy, the healthy manly sentiment pervading it, and the vigorous tramp of the verse, surprised and charmed the reader. There was nothing like it in our language; and the fame of the new poet spread through the country. Before this time the pretty cottage at Lasswade had been exchanged for Ashestiel, which Scott described as "a decent farm-house, overhanging the Tweed, and situated in a wild pastoral country." His biographer writes: "A more beautiful situation for the residence of a poet could not be conceived. The house was then a small one; but, compared with the cottage at Lasswade, its accommodations were amply sufficient. You approached it through an old-fashioned garden with holly hedges and

broad green terrace walks. On one side, close under the windows, is a deep ravine, clothed with very venerable trees, down which a mountain rivulet is heard more than seen in its progress to the Tweed. The river itself is separated from the high bank on which the house stands only by a narrow meadow of the richest verdure. Opposite, and all around, are the green hills. The valley there is narrow, and the aspect in every direction is that of perfect pastoral repose. The heights immediately behind are those which divide the Tweed from the Yarrow; and the latter celebrated stream lies within an easy ride, in the course of which the traveller passes through a variety of the finest mountain scenery in the south of Scotland."

This period of Scott's life, though not the most famous, was probably the happiest. He was in the prime of manly vigour, in possession of a good income, with leisure for the field sports in which he delighted, and with "long solitary evenings, for the uninterrupted exercise of his pen." His success as a poet had decided his vocation. He wrote because he could not help writing; he undertook severe editorial labour because he loved it; and yet, strangely enough, if Scott had one grain of affecta-

tion in his healthy, open, manly nature, it is to be found in the slighting and half-contemptuous way in which, again and again, he speaks of literature as a profession. He piqued himself on being a man of business, and his business transactions destroyed all the comfort of his life, and even life itself.

The year 1808 was signalised in the poet's life by the publication of "Marmion," a poem which, despite defects of plot and some carelessness of versification, is, on the whole, perhaps the finest which Scott produced. There are passages in it which he never excelled, and which, in their way, are altogether unrivalled. As we read, we seem to catch the sound of "the spirit-stirring drum and the ear-piercing fife," we see the smoke of the battle-field and hear the neigh of the war-horse. "Marmion," which, like the rest of Scott's great poems, was published in quarto, and at a guinea and a-half, proved as popular as the "Lay." Two thousand copies were disposed of in less than a month. A few weeks after its appearance the poet produced his edition of Dryden's works, in eighteen volumes, and immediately afterwards he undertook to edit, on a similar scale, the works of Swift, and to write a life of the Dean. He had other ponderous tasks in hand at the same time, which would

have severely taxed the powers of another man. But there was in Scot a *vivida vis animi* which overcame all difficulties, and made the severest labour a pleasure. Late in life, speaking of the work in which he engaged at this period, he said, "Ay, it was enough to tear me to pieces; but there was a wonderful exhilaration about it all. My blood was kept at fever pitch; I felt as if I could have grappled with anything and everything."

Scott was now in his thirty-seventh year; and before continuing the story of his literary achievements, it may be well to pause and to describe the home life of the poet. We cannot do this better than in his words of his biographer. Mr. Lockhart writes:—

"He had now two boys and two girls, and he never had more. He was not one of those who take much delight in a mere infant; but no father ever devoted more time and tender care to his offspring than he did to each of his as they reached the age when they could listen to him and understand his talk. Like their playmates, Camp and the greyhounds, they had at all times free access to his study; he never considered their prattle as any disturbance; they went and came as pleased their fancy; he was always ready to answer their

questions; and when they, unconscious how he was engaged, entreated him to lay down his pen and tell them a story, he would take them on his knee, repeat a ballad or a legend, kiss them, and set them down again to their marbles or ninepins, and resume his labour as if refreshed by the interruption. From a very early age he made them dine at table, and to sit up to supper was the great reward when they had been 'very good bairns.'"

Scott, as we have said, delighted in all vigorous physical exercise, especially if it were attended with some degree of danger. He inspired his children with the same ardour. He taught them to think nothing of tumbles, and habituated them to his own reckless delight in perilous fords and flooded streams, and they all imbibed in great perfection his passion for horses, as well as his deep reverence for the more important article of that Persian training. "Without courage," he said, "there cannot be truth; and without truth there can be no other virtue." Then we are told how Scott would gather his children round him upon Sunday, and relate to them Bible stories; how he delighted to excite their curiosity and to stimulate their imagination; how he taught his eldest boy Latin; and how, having a horror of boarding-

schools for girls, he never allowed his daughters to learn anything out of his own house, and chose their governess "with far greater regard to her kind good temper and excellent moral and religious principles, than to the measure of her attainments in what are called fashionable accomplishments."

Another characteristic of Scott was his affection for his dogs. When Camp, one of his first favourites, died, Mrs. Lockhart says that her father smoothed the turf over his grave with the saddest expression of face she had ever seen in him. He had a dinner engagement upon that day, but excused himself on account of "the death of a dear old friend." He would speak to his dogs, Washington Irving relates, as if they were rational companions, and when he walked out, half-a-dozen of them followed at his heels.

In the year 1810, Scott attained the summit of his fame as a poet by the publication of the "Lady of the Lake." Never, probably, was a poem more heartily welcomed by the public. "The whole country rang with the praises of the poet. Crowds set off to view the scenery of Loch Katrine, till then comparatively unknown; and, as the book came out just before the season for excursions, every house and inn in that neighbourhood was

crowded with a constant succession of visitors. It is a well-ascertained fact that, from the date of the publication of the 'Lady of the Lake,' the post-horse duty in Scotland rose to an extraordinary degree, and, indeed, it continued to do so regularly for a number of years." Scott, however, confessed—and his sincerity in these matters is beyond all question—that he was never a partisan of his own poetry, "even when it was in the highest fashion with the million." And it is related, that when Miss Scott was asked how she liked the poem, she replied, with perfect simplicity, "Oh, I have not read it. Papa says there's nothing so bad for young people as reading bad poetry." The verdict of the poet has not been that of the nation. The "Lady of the Lake" will always be admired for its local colouring and picturesque descriptions, for the charm of the story and the graceful flow of the rhythm. Two years and a-half elapsed, and then "Rokeby" appeared. During the composition of the poem, Scott was occupied also in building and planting his new estate of Abbotsford. "As for the house and the poem," he said, "there are twelve masons hammering at the one, and a poor noodle at the other." "Rokeby" sold at first, like its predecessors, with

wonderful rapidity, three thousand copies being disposed of on the day of publication ; but it never gained the high position of the “Lay,” of “Marmion,” and of the “Lady of the Lake.” Two months afterwards appeared the “Bridal of Triermain,” which was published anonymously, and deceived the critics. It was followed, at some interval, by the “Lord of the Isles,” which may be said to close Scott’s career as a poet, if we adopt the dictionary definition of that word—“One who writes in measure.” But, in truth, Walter Scott was never more a poet than when he ceased to write in verse. On taking up the pen of the romance-writer, all his marvellous powers appeared to have free play. Here he found scope and verge enough for his imaginative genius, for his accumulated stores of knowledge, for his lively humour and his taste for antiquarian research. In the composition of “Waverley,” Scott had hit upon a new vein ; and we all know with what energy and success he worked it, and how carefully he endeavoured to preserve his incognito with the public—being known to them only as “the Great Unknown.” For several years the rapidity of his workmanship was as remarkable as its excellence. His diction is not always pure, his style is often

careless, but his descriptions are always graphic, his characters are well defined and thoroughly human; and, while we are transported into a world of high romance, of gorgeous ceremonies, and of antique customs, it is only to feel all the more keenly how much there is that is true and beautiful, and worthy of our love in the lowly lives and simple manners of the contented poor.*

In this brief paper it is impossible to follow, step by step, the career of Scott as a man or as an author. For several years it was marked by prodigious efforts and by marvellous success. Romance followed romance so rapidly, that the public verdict was scarcely pronounced upon one before another was, in the press. His income rose to ten thousand and fifteen thousand per annum; he enlarged his estate at Abbotsford; he kept open house; princes and dukes dined at his table, as well as Scotch lairds, familiar friends, and poor relations. Men

* It is told of Scott, and the statement is highly characteristic, that he once rebuked his daughter for calling something vulgar. "My love," he said, "you speak like a very young lady; do you know, after all, the meaning of this word *vulgar*? 'Tis only *common*; nothing that is common, except wickedness, can deserve to be spoken of in a tone of contempt; and when you have lived to my years, you will be disposed to agree with me in thanking God that nothing really worth having or caring about in this world is *uncommon*."

of letters and men of science found ever a cordial welcome, and young men whose aspirations were as yet greater than their deeds were kindly received by the "sheriff," who possessed the rare art of putting every one at his ease. The strange thing was, that Scott, while working, probably, harder than any author of the age, except Southey, appeared to have all the leisure of a country gentleman, devoting a great portion of his mornings to out-of-door occupations, and "the whole of his evenings to the entertainment of a constantly varying circle of guests."

"The hospitality of his afternoons must alone have been enough to exhaust the energies of almost any man; for his visitors did not mean, like those of country houses in general, to enjoy the landlord's good cheer and amuse each other, but the far greater proportion arrived from a distance for the sole sake of the poet and novelist himself, whose person they had never before seen, and whose voice they might never again have an opportunity of hearing."

It is pleasant to know that, amidst the aggrandisement of fortune and a literary reputation which made him, with the exception of the Duke of Wellington, the foremost man in Great Britain,

Scott preserved all his simplicity of character and kindness of heart. No master was ever more respectfully treated and better served by his dependants, and yet he behaved towards them with that friendly familiarity which has now well-nigh disappeared, with many other old and genial customs. He knew well all the peasantry on or near his estate, and was always ready with a kind word, with good advice, or, if necessary, with pecuniary assistance.* “Sir Walter,” said one of his workmen, “speaks to every man as if they were blood-relations.” Unfortunately, we are compelled to turn to another and a gloomy side of the picture. Scott desired ardently to be the founder of a family, and to become a great landed proprietor. To enlarge and embellish his estate was an ambition to achieve which cost him unparalleled exertions; and such was his need of money for this work, that he was willing to receive large sums from the publisher for novels before they were in manuscript or even in the author’s brain. Thus we find that in one instance 10,000*l.* was

* Elccemosynary aid was, however, rarely given. “Take care,” he once said, “not to give the poor anything gratis; except when they are under the grip of immediate misery—what *they* think misery—consider it a sin to do anything that can tend to make them lose the precious feeling of independence.”

advanced in this way for works of fiction still in embryo; and the poet was urged on by his sanguine publisher to additional ventures in other departments of literature. This and other causes produced at length a fatal catastrophe. Meanwhile, by the express wish of George IV., Scott received the honour of a baronetcy, which he fondly hoped to transmit, with a splendid estate, to his eldest son. In little more than twenty years after the title was conferred, it became extinct by the death of Sir Walter's son. The poet was at the height of his fame and worldly prosperity in 1825. In the following year he was in a state of bankruptcy, his debt being 130,000*l*. The clouds were gathering over him: his strength was not what it had been, and Lady Scott, the dear companion of nearly thirty years, was in a declining state of health. These were bitter trials; but Sir Walter had a strong heart, and bore up bravely under them. He resolved to devote the rest of his life to the service of his creditors; and in consideration of this engagement, which to the very utmost of his ability he manfully carried out, he was left in undisturbed possession of Abbotsford. So he worked harder than ever; in spite of family affliction and bereavement, in spite of

irritating pecuniary complications, he laboured on, contrary to his former custom, even through the evening hours ; gained 8,000*l.* for a single novel, the product of less than three months' labour, 18,000*l.* for his "Life of Napoleon," and diminished his debt by nearly 40,000*l.* in the short space of two years.

Scott had invincible courage, but neither body nor mind could long stand so severe a strain as this, and he was alarmed by apoplectic symptoms. During the last three or four years of his life several attacks occurred, and left behind them a shattered constitution. He rallied at times, and gave proofs of his old power, but it was evident the end was approaching. At length it was resolved, as a last resource, that Sir Walter should try the effect of a southern climate. Before he left Abbotsford, he was visited by his friend and brother-poet, Wordsworth, who on this sad parting wrote a memorable sonnet, which concludes with these fine lines :—

Lift up your hearts, ye mourners ! for the might
Of the whole world's good wishes with him goes ;
Blessings and prayers, in nobler retinue
Than sceptred king or laurelled conqueror knows,
Follow this wondrous potentate. Be true,
Ye winds of ocean, and the Midland Sea,
Wafting your charge to soft Parthenope.

If Scott carried with him the good wishes of the civilised world, he also received much of the honour which is usually reserved for royalty. A frigate was placed at his disposal by the Government, the First Lord of the Admiralty and the Secretary both went to Portsmouth to see that nothing had been neglected, and the most anxious efforts were made to study his comfort and administer to his enjoyment. In Italy, Sir Walter was received with every demonstration of respect, but the fatal malady was not arrested by the change of scene and air. He had hoped to return through Germany, and to visit Goethe at Weimar, when he received the news of his death. "Alas for Goethe!" he exclaimed; "but he at least died at home. Let us to Abbotsford." On reaching London, he was driven to St. James's Hotel in Jermyn Street, where he remained for more than a fortnight in an utterly exhausted state.

"During these melancholy weeks," writes Mr. Lockhart, "great interest and sympathy were manifested. Allan Cunningham mentions that, walking home late one night, he found several working men standing together at the corner of Jermyn Street, and one of them asked him—as if

there was but one death-bed in London—"Do you know, sir, if this is the street where he is lying?" The enquiries, both at the hotel and at my house, were incessant; and I think there was hardly a member of the royal family who did not send every day."

On the 7th of July, 1832, at his earnest request, he was removed to Abbotsford. The voyage to Scotland was made in a state of almost total unconsciousness. On approaching in his carriage the dear and familiar spots near his estate, his mind revived a little; and, after a night's rest under his own roof, a more distinct consciousness returned. He was wheeled about the grounds and then through the rooms. "I have seen much," he kept saying, "but nothing like my ain house—give me one turn more." Next morning he was better still, and expressed a wish that his son-in-law should read to him. "When I asked from what book, he said, 'Need you ask? There is but one.' I chose the 14th chapter of St. John's Gospel. He listened with mild devotion, and said when I had done, 'Well, this is a great comfort. I have followed you distinctly, and I feel as if I were yet to be myself again.' More than once, too, he listened with

interest to once familiar passages from his favourite poet Crabbe ; but he heard them as if they were novelties, while he seemed to have a vivid recollection of whatever was read from the Bible." The closing scene shall be described in the beautiful language of his biographer.

“ As I was dressing on the morning of Monday, the 17th of September, Nicolson came into my room and told me that his master had awoke in a state of composure and consciousness, and wished to see me immediately. I found him entirely himself, though in the last extreme of feebleness. His eye was clear and calm, every trace of the wild fire of delirium extinguished. ‘ Lockhart,’ he said, ‘ I may have but a minute to speak to you. My dear, be a good man ; be virtuous, be religious, be a good man. Nothing else will give you any comfort when you come to lie here.’ He paused, and I said, ‘ Shall I send for Sophia and Anne ?’ ‘ No,’ said he ; ‘ don’t disturb them, poor souls ! I know they were up all night. God bless you all.’ With this he sank into a very tranquil sleep, and indeed he scarcely afterwards gave any sign of consciousness, except for an instant, on the arrival of his sons. About half-past one P.M. on the 21st of September, Sir

Walter breathed his last in the presence of all his children. It was a beautiful day—so warm, that every window was wide open ; and so perfectly still, that the sound of all others most delicious to his ear, the gentle ripple of the Tweed over its pebbles, was distinctly audible as we knelt around the bed ; and his eldest son kissed and closed his eyes. No sculptor ever modelled a more majestic image of repose.”

VII.

THOMAS ARNOLD.

THOMAS ARNOLD was born on June 13, 1795, at West Cowes, in the Isle of Wight. When a boy he lost his father. His early education was superintended by his aunt, Miss Delafield. In 1803 he was sent to Warminster School, whence he was removed four years afterwards to Winchester. As a boy, he was retiring and shy in his manners, but warm-hearted, and in his nature capable even then of forming and sustaining close and permanent friendships. The sports in which he most delighted with the playmates of his childhood were sailing rival fleets in his father's garden, or acting the battles of the Homeric heroes, or reciting their several speeches from Pope's translation of the "Iliad." He was from his earliest years fond of ballad poetry, which appealed to the martial and emotional sides of his character; and his sea-board residence in the Isle of Wight, while it ministered to a child's excitement in naval and military



ARNOLD'S HOUSE.

matters, was in strong but unconscious harmony with the natural freshness and breadth of his character.

As an indication of the pursuits which in later life occupied his attention, he developed while at school a remarkable interest in history and geography. He suffered no books on these subjects which came within his reach to pass him by. Before leaving school he had read Gibbon and Mitford twice over. Such works made strong and lasting impressions upon him. During his Professorship at Oxford, he quoted from memory Priestley's "Lectures on History," which he had not seen since he was eight years of age. The talent for philosophical criticism which afterwards signalised him, broke forth in his Winchester letters. He records in them his "indignation at the numerous boasts which are everywhere to be met with in the Latin writers. I verily believe," he adds, "that half, at least, of the Roman history is, if not totally false, at least scandalously exaggerated. How far different are the modest, unaffected, and impartial narrations of Herodotus, Thucydides, and Xenophon!" His love of history grew upon him as he advanced in years: he delighted in it, as "simply a search after truth,

where, by daily becoming more familiar with it, truth seems for ever more within your grasp." The past was to him a living thing: its images were continually before his mind. The forms and scenes of other days he realised with extraordinary vividness of feeling. Viewing human life and action in the world as a great scheme, the parts of which were in harmony, he never tired in seeking for the links which bound the whole together, and in tracing the progressive steps by which the final triumph of good or right was to be secured. His name is indissolubly connected in English literature with Roman history. Three published volumes of his carry down the history of the Commonwealth to the end of the second Punic war. It is true that his interests were more deeply stirred by Grecian than by Roman history. Partly, however, his personal regard for Niebuhr and Bunsen, partly the Roman character, so full of love for municipal institutions and of reverence for order and law, and the vastness of the subject—the history of the world in his mind lying pictured in the history of Rome—led him to conceive the design of this great work, which it was his intention to carry down to the coronation of Charlemagne. But while he lingered over the earlier

and legendic eras, he longed to hurry on to the Imperial and Christian times, and to write the history of the Church, not in a distinct form, but, as he thought it ought to be written, in conjunction with the history of the world. "The period from Augustus to Aurelian," he writes in 1824, "I would not give up to any one, because I have a particular object, namely, to blend the civil and religious history more than has ever yet been done." Arnold's ambition was to make his History the very reverse of Gibbon's—that whereas the whole spirit of that work, from its low morality, is hostile to religion, so his greatest desire would be, by a high moral tone, to be of use to the cause of religion, but without any unnecessary parade.

In connection with his historical studies, let us glance at his first visit to Rome. It was in 1825 that he became acquainted with Niebuhr's immortal work. To read it he had learnt German. It fired him with enthusiasm. The vigour of intellect and the philosophical subtlety which it displayed he determined to emulate. It struck a chord in his heart which vibrated to the end of his life. These feelings of admiration were strengthened by the friendship which he formed

with Bunsen, Niebuhr's successor as minister from Prussia at the Papal Court. He arrived in Rome in the spring of 1827. It was night when he entered. The following day he records his first impressions, as he gazed from Bunsen's house on the Capitol over the scene of so much earthly glory: "Never shall I forget the view. We looked down on the Forum, and just opposite were the Palatine and the Aventine, with the ruins of the palace of the Cæsars on the one, and houses intermixed with gardens on the other. The mass of the Colosseum rose beyond the Forum, and beyond all the wide plain of the Campagna to the sea. On the left rose the Alban hills, bright in the setting sun, which played full upon Frascati and Albano, and the trees which edge the lake. Then we descended into the Forum, the light fast fading away, and throwing a kindred soberness over the scene of ruin. There it was, one scene of desolation, from the massy foundation-stones of the Capitoline Temple, which were laid by Tarquinius the Proud, to a single pillar erected in honour of Phocas, the Eastern emperor in the fifth century. What the fragments of pillars belonged to, perhaps, we never can know; but that, I think, matters little. I care not whether it was a Temple

of Jupiter Stator or the Basilica Julia, but one knows that one is on the ground of the Forum under the Capitol, the place where the tribes assembled and the orators spoke; the scene, in short, of the internal struggles of the Roman people."

When at Rome, he devoted himself exclusively to the city and surrounding country. He cared very little to look at the churches, and nothing at all for the recollection of them. He felt the deepest abhorrence for the religion which, he said, fed the people with poison. He was tenderly affected on his departure. The inexpressible solemnity and beauty of Rome's ruined condition sank into his soul; the Forum, the Colosseum, and the surrounding country, he never could forget.

Once again, in 1840, in the course of a more extended tour, he visited Rome. The interval had been spent on his history, and labouring in the school of which we shall shortly speak. This time he arrived by day. A most graphic account is given in his letters of his last approach to Rome, as the objects with which his literary pursuits had made him familiar appeared along the way. It thrilled him strangely to be once

more in the place (round which his studies and his life had been gathered), the third city of God's election, with Athens elected for temporal as Jerusalem for eternal things. But he was now near the end of his pilgrimage, and with his recollections of Rome refreshed, and Naples visited, he clung more closely to his English home among the mountains. No possible excess of beauty in any other scene could balance the deep charm of home which at Fox How breathed through everything. It left him nothing to desire. In all his wanderings his heart fondly turned to it in thought as a place of peace and rest such as his spirit loved.

We must now go back to Arnold's first arrival at Oxford. In his sixteenth year he was elected a scholar at Corpus Christi. In 1814, he took a first class, and became a Fellow of Oriel shortly afterwards. He continued for some time to reside at the University. He bore to it a deep affection. It enshrined within its walls his happiest recollections. Copleston, Keble, Hampden, and Whately, were among his associates. Newman was chosen for his vacant fellowship. His vigorous mind daily accumulated stores of knowledge. His youthful predilection for historical subjects received ad-

ditional strength. He delighted in dialectics and philological studies, and was not averse to poetry. He came to Oxford a mere boy. He went down an accomplished man, but still in heart a boy, eager, simple, and unaffected. For four years he supported himself by taking private pupils, while he read extensively in the College Libraries, an advantage which in their early years he often impressed upon others.

Meanwhile he had been gradually led to fix upon his future career. Before leaving Oxford he was ordained a Deacon of the Church of England; and in 1820 he married Mary Penrose, having in the preceding year settled at Laleham, near Staines, where he remained for the next nine years, receiving pupils, and preparing them for the Universities. Dull and prosaic as his outward life at Laleham was, it was not idly spent. His spare hours were given up to classical and historical studies. He contributed to the pages of the *Encyclopædia Britannica*. An edition of Thucydides, with Latin notes, issued from his pen. But more lasting and rich in effect were the invigorating and shaping processes through which his life was made to pass. While he rested awhile at Laleham before the battle began, his growth

both spiritually and intellectually was rapid. With the passing away of youth, his thoughts and views were stamped into a graver energy of character, and, while they became more practicable as they were more limited in range, his mind took the tone of massive strength which ever after distinguished him above his fellows. His marriage and its new influences, the early loss of his brother, the responsibility of his position as a teacher, developed and exercised the powers and passions with which his being was so amply endowed. The principles and duties to which hitherto he had given an intellectual assent he now proceeded practically to carry out, and in the solemn conviction of their truth steadily to impress upon others.

Above all, it was at Laleham that the intellectual doubts which obscured his vision on the first opening of his mind to the realities of religious belief vanished away. "Long exercised with difficulties as to the person and claims of Jesus Christ, he had at length reached to such an intense and all-subduing conviction of these points, that a continual consciousness of love and adoration, of joy and confidence towards the Redeemer, filled his soul. He seemed not so much to have derived his

religion from books as to have personally known and dwelt with Christ, to have drawn near to Him as to a living Friend and Master, with a full and loving sense of close companionship. Hence it was that his life was not so much that of a follower in these distant times as that of a disciple who had waited on the very ministry of the Saviour; one who had listened to Him on the Mount and in the Temple, and had stood beside Him at the Cross." Amidst the vagueness of the ideas with which the terms Providence, the Supreme Being, the Deity, were mixed up in his mind, it was a real comfort to him to know "that in Jesus Christ our Lord is represented all the fulness of the Godhead, until we know even as we are known;" that He was still the self-same Jesus in all His human affections and Divine gifts; that every necessity of his moral and intellectual nature received its full satisfaction in One whom he delighted to honour as his Lord and his God. "Where can we find a name," was his earnest inquiry, "so holy that we may surrender our whole souls to it, before which obedience, reverence without measure, intense humility, most unreserved adoration, may be all duly rendered?" In the answer to this question

lay the secret well from which the fresh springs of his life issued forth abundantly. "One Name there is, and one alone, one alone in heaven and earth—not truth, not justice, not benevolence, not Christ's mother, not His holiest servants, not His blessed sacraments, not His very mystical body the Church, but Himself only, who died for us and rose again, Jesus Christ, both God and Man."

In the year 1828, Dr. Arnold entered on the second act of his life. After eight years of peace, almost of premature rest, at Laleham, he emerged into publicity as head master of one of the leading English educational establishments. He was appointed to Rugby School, and it is as chief of Rugby that he is principally known. These years of quiet had strengthened his talents and braced his mental energies for work in the world. His character was now to be tested on life's tempestuous sea. And he was thankful to be called to a scene of harder and more anxious labour. Life beside the lovely reaches of the Thames was liable to assume a set grey colour, to be too characterless, too serene, too deficient in incident. At Laleham it was necessary to stimulate his appetite for work by foreign travel. The refreshing,

strengthening experiences of life abroad relieved the sombre aspect of a routine existence, which was felt the more as the keen activities of his mind craved for exercise.

The situation which he now obtained was thoroughly congenial to him. At Laleham his love of tuition had become a passion. He stated that he could hardly live without such employment. With a matured intellect he had a boyish freshness and spirit. With the natural chivalry of noble boys he was in intimate sympathy. His delight in sports and athletic exercises had never faltered since his youth. Above all, he desired to carry out his favourite idea of uniting things secular and spiritual, and of developing the highest principles of action in regions hitherto reckoned uncongenial to their reception. Such an opportunity he now possessed, and he proceeded at once to turn it to account. The management of the school by Arnold verified the prediction of Dr. Hawkins, that if Arnold were elected he would change the face of education all through the public schools of England. We shall briefly glance at his work at Rugby, it being impossible to do more in the limits of such a paper as this.

To make Christian men out of boys, and Rugby

a place of Christian education, was the keystone of Arnold's system. He based his whole management on the conviction that what he had to look for, both intellectually and morally, was not performance but promise. He considered the freedom and independence of school life to be the best preparation for Christian manhood. He abstained from pressing on the consciences of boys rules which they were not able to bear, and to the moral force of which they were insensible. Keenly sensible that "the victory of fallen man lies not in innocence, but in tried virtue," he desired to create a character rather than to enforce rigid principles. "I hold fast," he said in 1837, "to the great truth, that blessed is he that overcometh." The growth of a regard for what was true and pure in the school he viewed with the most tender interest; valuable as he considered it to be, not for what these things would bring, but because they belonged to and sprang out of that relation of the soul to God, to which all other relations must be held to be subordinate. In a word, his object was to pour a religious spirit into the education given at Rugby. It was not so much, in popular phraseology, to be based on religion, as to be *religious*; to be filled and inter-

penetrated with the elevating and ennobling influences of a true Christian life. Arnold knew that the world itself was imaged in the school over which he presided; that as character was formed at Rugby, so would it conquer or yield when subjected to the world's temptations and trials.

Aware, too, of the deceptions of life's promise, and the dangers of shipwreck which would beset a faith not trained to meet assault, he addressed himself with assiduity to cultivate in his boys an earnest morality and high principle, as the great preservatives against sin and error. He insisted with peculiar energy on the strong distinctions between good and evil—claiming their love for the former, and appealing to them, as men, to aid him in the struggle to make the good triumphant. Lying he utterly abhorred; if persisted in, it was visited with expulsion. As the best method of encouraging and rewarding truthfulness, he made a habit of placing implicit reliance on a boy's word. Any attempt at further proof he checked: "If you say so, that is quite enough; of course I believe your word;" and there grew up in consequence a general feeling "that it was a shame to tell Arnold a lie; he always believes one."

Arnold never gave in to the modern cant that flogging was degrading or cruel. He retained it in the school, but only for grave moral offences, such as lying and drunkenness. Against the attacks of so-called liberal journals he defended the course he followed with energy and spirit. He believed that corporal punishment fitly answered to and marked the naturally inferior state of boyhood. To the argument that it was degrading, he replied, "I know well of what feeling this is the expression: it originates in the proud notion of personal independence, which is neither reasonable nor Christian, but essentially barbarian. At an age when it is almost impossible to find a true manly sense of the degradation of guilt or faults, where is the sense of encouraging a fantastic sense of the degradation of personal correction?"

The contagion of evil in a great school was a source of serious uneasiness to Arnold. The deference to public opinion, the timidity of the well-disposed, the intolerance of what was God-fearing and pure among careless boys, made him almost despair of success. When he saw a group of vicious boys gathered round the fire, "it makes me think," he would say, "that I see the devil in

the midst of them." To meet this evil, he availed himself of the machinery of the sixth form. It consisted of thirty of the oldest boys in the school. He desired that every one of them should feel that he was equally responsible with the head master for the moral well-being of the institution. It was just when they began to attain to independence, and some degree of self-respect, and desire to win the respect of others, that they were invested with those privileges which are popularly associated with the system of fagging. He had hopes that their influence would act like leaven in the school. The sixth was to be to it all that he was to them. If he had confidence in the sixth, he would exchange his position for no other in England. "If they do not support me," he said, "I must go." He occasionally made short addresses to the sixth form, and especially at the end and beginning of every half, commenting on the state of the school as he would speak to his friends. At such times he earnestly reminded them of their duties, and enforced the paramount importance, first, of religious and moral principles; secondly, gentlemanly conduct; and thirdly, intellectual ability.

From first to last Arnold made classical studies the basis of intellectual teaching in the school.

In connection with them he pointed out and taught the value of philological studies. He endeavoured to create an interest in the history of philosophy and political systems of the ancients, as distinguished from studies in verbal criticism or fine scholarship. He introduced the study of modern history and modern language; and where he detected a natural aptitude, he encouraged the taste for geological and other kindred pursuits. He was especially careful to accommodate his system of instruction to suit the various necessities of different minds, aiming at intellectual expansion rather more than mere instruction. Any genuine thirst for knowledge he eagerly seized and turned to advantage, provided the gratification of it was not inconsistent with the leading principles of his method. In the struggle of dull and industrious boys he took especial interest, though he was naturally more strongly attracted by intellectual vigour. He once said, "If there be one thing on earth truly admirable, it is to see God's wisdom blessing an inferiority of natural powers where they have been honestly, truly, and zealously cultivated." In speaking of a pupil of this character he observed, "I would stand to that man hat in hand."

It was part of his plan to endeavour to awaken the intellectual energy of every boy entrusted to him. For this reason he taught by questioning. Whatever points he found to be of interest to any individual boy he brought forward prominently, and incorporated in his teaching. He made great account of any indication or promise of real thought. But his highest aim was to invest school life with a warm religious colouring. Religion was to be brought down from the far region of the skies, and made a familiar thing to his pupils. He strove to place it within the reach of every one of the boys, and to suggest it to their minds in the most delicate and unobtrusive manner. He wished to make it appear to them that religious habits were worth winning; that a spirit of piety was no compliment to him, but in itself a sure reward; that it was not only their duty to fear God, but that in doing so lay the secret of true manliness and all nobility of will; that the highest relations of the soul were to be had with the invisible and unimagined scenes that lie beyond. Religion was not only to inspire their thought, but to control their lives—dwelling with them as a directing, warning, and comforting power, correcting and balancing the seeming

caprice and error of life by the harmonies of a faith that rests in the assurance that all is well. He employed very characteristic methods to render the study of Christianity more in company with their thoughts, more a part of their daily life. For instance, he recommended his pupils to note in any book they read such judgments of men and things, and such a tone of speaking, as are manifestly at variance with the spirit of Christ. He used to ask them "if the Christian ever feels more keenly awake to the purity of the spirit of the Gospel than when he reads the history of crimes narrated with no true sense of their evil." But, above all, he laboured to bring before his pupils a sense of their Saviour's presence, and of His personal close relationship to each of them. A pupil said of him: "He had the freshest view of our Lord's life and death that I ever knew a man to possess. His rich mind filled up the naked outline of Gospel history. It was to him the most interesting fact that had ever happened—as real, as exciting, as any recent event in modern history of which the effects are visible." This vivid realisation of the life of Christ he wished to extend to others. As in things secular it was his object to make his pupils think for

themselves, so in religion he desired that his boys should have a personal living faith.

When preparing them for Confirmation, he would endeavour to make them say, "Christ died for me," instead of "Christ died for us," as being too general, and unlikely through its vagueness to awaken thought or to stir feeling. The religion that he advocated was no class religion. It was not made to depend on education, however much the latter might enhance its value, nor on culture, however needful that might be for its due exercise. Formalism he abhorred. Penetrating to the underlying meaning, the thing signified, he could not linger long in outward shows and pattern, however useful forms might be in leading on to the life that they half revealed and half concealed. He sought an entrance for his Lord and Master into the inner shrine of a boy's heart and conscience. He would have his pupils to know what it was to be alone with God. For this purpose he addressed himself to their spiritual natures in the earnest conviction that, valuable as the intellectual faculties are to discern and distinguish truth, yet God's chief controversy is with the heart. But while he laid great stress upon the surrender of the heart to God's service, he sanctioned no

divorce of spiritual from intellectual things. Both were to grow together—the mind contributing strength, and the spirit keeping the intellect true and loving in obedience. Rather than quench investigation, his aim was to promote it. He had no fears that Christianity could suffer at the hands of an earnest enquirer; but he dreaded the careless coldness of a lazy assent.

But it was from the pulpit of Rugby chapel that Arnold chiefly made his influence felt. When a vacancy arose in 1831, he sought to be, and he was appointed, chaplain to the school. In the system that he endeavoured to carry out, he felt bound to be the pastor as well as the teacher. No one, he considered, could speak to the boys with the same influence, and no one could take so living and keen an interest in them. From the autumn of the year in which he assumed the duties of chaplain, he preached in the afternoon of almost every school Sunday. His sermons were written on that day. They were short, practical, often vehement, never controversial. In point of style they will long be looked upon as models of their kind. When he began first to preach, he felt it to be his duty to lay bare unsparingly the evil that existed in the school. Subsequently he adopted a

gentler tone, and mingled affectionate entreaties and loving remonstrances with his bolder denunciations of loose and disorderly conduct, "desiring to sink the mention of particular faults in the inculcation of a spirit of love to Christ and abhorrence of evil." As years advanced, he thought less of rules, and more of that spirit which lives above rules, whose service is the service of freedom, not of an enforced obedience. Hence his anxiety to speak from the pulpit of broad principles of action, that looked beyond petty individual actions and the fleeting passions of the moment. Most chiefly in the pulpit Arnold felt the full weight of his responsibility. He was still the teacher, but in a more solemn manner and with a graver energy. In his sermons nothing was so marked as his thorough genuineness. He appeared before his pupils as one of themselves, conscious of his own infirmities, sympathising in their warfare with evil, tender over their faults, and yet always holding forth the loftiest ideal of true Christian life. The sight of his congregation powerfully quickened his interest in his work. He could scarcely look round on his 300 boys without visible emotion. Few can forget the earnestness of his voice as he entered deeply into the spirit of the service, or the

way in which his expressive features would kindle with animation at his favourite versicle in the *Te Deum*, "When Thou hadst overcome the sharpness of death, Thou didst open the kingdom of heaven to all believers." The Holy Communion was celebrated four times a-year. Sometimes out of 300 boys he had 100 attendants, generally 70. He watched with special satisfaction the approach of a new face to the Holy Table, where a larger attendance than usual filled him with pleasure and hope. He rarely spoke of it to the boys individually, and if in his sermons he alluded to it, it was to remind them that it was a communion not only with God but with one another, and was meant to balance that evil companionship which as binding together for evil he had so constantly to deplore in the school. And when in the administration of the elements, especially to the young, he bent down, and with tearful eyes and faltering voice spoke to them in the beautiful words of our service, it was felt how fatherly was the love and interest with which he watched the first beginning of a Christian endeavour after good.

Rugby was privileged to enjoy Arnold's superintendence for nearly fourteen years. During this period his energies were chiefly directed to the

business of the school, but he found time also for much literary work, as well as for an extensive correspondence. Five volumes of sermons, his Roman History in three volumes, besides numerous contributions to reviews, magazines, and periodicals, attest the untiring activity of his mind and his restless energy during that period. His interest also in public matters was incessant, especially such as bore on the social welfare and moral improvement of the masses. Ecclesiastical questions occupied a large share of his attention. He was earnest for Church reform, and continually disposed to take a despairing view of the prospects of the hierarchy. From the beginning he had watched with growing interest the progress of those opinions and tendencies at Oxford which have issued in results that Arnold was among the first to predict.

In 1841, Dr. Arnold received from Lord Melbourne the offer of the chair of Modern History at Oxford, which he accepted with peculiar satisfaction. It revived his connection with Oxford, which was pleasantly associated with early and happy days. It set before him studies which were peculiarly congenial to his mind, and it brought him into personal relationship with young minds, about

which in his regard there hung a special and a wondrous charm. Its duties were not onerous, and it provided him with a profession against the time when he should be obliged to retire from the responsibility of such a place as Rugby, and seek that ease to which, amid all the cares and distractions of life, he was continually looking forward. He delivered his inaugural lecture on December 2, 1841. Unable to be absent from Rugby for more than one day, he left very early in the morning and arrived at Oxford at noon. It was remarkable in the decay of the professorial system—for, owing to the infirmities of the late professor, the duties of the chair had not been discharged for years—to witness the crowd which filled the area and the galleries of the Clarendon Buildings when Arnold arose to speak, surrounded by the highest authorities at Oxford; while the dignity of his presence and the tones of a voice well known to many lent a charm and a weight to the kindling words of the Master of Rugby. Again he appeared at Oxford in the Lent Term of 1842. He had crowded audiences. Many listened with earnest attention who felt that he was on many points opposed to their whole intellectual life. It touched him deeply to see the enthusiasm with which he was

received and welcomed in his own beloved Oxford. When the duties of the day were done, accompanied by his children he would wander over the haunts of his early manhood, and linger in the scenes which, as they were so dear, were ever before him with an eternal freshness.

But the shadow of the grave was then upon him. His Lenten series of lectures, which he looked on as introductory merely, were to be his last utterances at Oxford. It is noticed how frequently in these lectures he made use of such expressions as, "If I am allowed to resume these lectures," "if life and health be spared me," "if God permit." The opening lecture of the next term was fixed for June 2. He was obliged to give it up. On the 5th he preached his farewell sermon in the chapel before breaking up for the vacation. They were the last words he ever uttered from that place. What occurred afterwards brought them home with deep solemnity to the hearts of his hearers. "The real point," he said, in conclusion, "which concerns us all, is not whether our sin be of one kind or another, more or less venial, or more or less mischievous in man's judgment and to our worldly interests, but whether we struggle against all sin, because it is sin, whether we have or have not

placed ourselves consciously under the banner of our Lord Jesus Christ, trusting in Him, cleaving to Him, feeding on Him by faith daily, and so resolved to be His faithful soldiers and servants to our lives' end. To this I would call you all, especially all who are likely to meet here again after a short interval, that you may return Christ's servants with a believing and loving heart; and if this be so, I care little as to what particular form temptations from without may take. There will be a security within—a security not of man, but of God.” His diary, which he kept but only for three weeks before his death, and in which he recorded his most intimate feelings, contains the following passage written on the day which followed his last appearance in the school chapel:—

“*Monday evening, June 6.*—I have felt better and stronger all this day, and I thank God for it. But may He keep my heart tender. May He keep me gentle and patient, yet active and zealous; may He bless me in Himself and in His Son. May He make me humble-minded in this, that I do not look for good things as my portion here, but rather should look for troubles as what I deserve and as what Christ's people are to bear.

‘If ye be without chastisement, of which all are partakers,’ &c. How much of good have I received at God’s hand, and shall I not also receive evil? Only, O Lord, strengthen me to bear it, whether it visit me in body, in mind, or in estate. Strengthen me with the grace which Thou didst vouchsafe to Thy martyrs, and let me not fall from Thee in any trial. O Lord, let me cherish a sober mind to be ready to bear evenly and not sullenly. O Lord, reveal to me Thyself in Christ Jesus, which knowledge will make all suffering and all trials easy. O Lord, bless my dearest wife, and strengthen us in the hardest of all trials, evil befalling each other. Bless our dear children, and give me grace to guide them wisely and lovingly through Jesus Christ. O Lord, may I join with all Thy people in heaven and on earth in offering up my prayers to Thee through our Lord Jesus Christ, and in saying, Glory be to Thy most holy Name for ever and ever.”

There are other passages written in those last few days, which, in their solemn simple beauty, seem to be voices speaking to us from some land of light and purity. On the following Saturday Arnold retired to bed apparently in perfect health; but before composing himself to rest, he put the

seal upon a busy and cheerful day by an entry in his diary which foreshadowed the awful event which was so near.

He awoke next morning, between five and six, in pain. It was angina pectoris; shortly afterwards lying still, he was observed with his hands clasped, his lips moving, and his eyes uplifted as if in prayer. He was repeating that passage in the Gospels, which all through his life he had turned to for strong consolation and in deep confirmation of a faith at once tender and true: "Jesus saith unto him, Thomas, because thou hast seen Me, thou hast believed: blessed are they that have not seen, and yet have believed." At eight o'clock he was dead. His body lies buried beneath the communion-table in the chancel of the school chapel, but his spirit is in a higher world with God and with the holy angels.

It is not our intention to speak of the part Arnold took in theology or politics. Many of the questions in which he was mixed up are still debated with heat; and any expression of opinion with regard to them would be out of place in a paper such as this. It is enough to say that he endured the penalty that is the heritage of every fearless and independent thinker. His

motives were suspected, his views misrepresented and proscribed, and friends grew cold who once looked upon him with affection. Mr. Theodore Hook made him the butt of his witticisms from week to week. Mr. Keble disowned him. The Archbishop of Canterbury closed the Lambeth pulpit against him on the occasion of the consecration of the Bishop of Norwich. But these things moved him not. He was firm in his own mind, as one who rested not in mere opinions, but was full of the earnest convictions which belong to strong belief. He was too honest not to be outspoken. He dared not lie to his own heart. The deep passionateness of his nature, which in his earlier life did homage to the ideal of truth and justice, made him indifferent to that wise caution and reticence which belong to men of a colder and more purely intellectual mould. His own testimony is that one of the improvements he had had to work out in himself was "to enlarge his nature from the worship of the sterner virtues into a more perfect temple, where tenderness, humility, and reverence were also to be worshipped." He did this less by setting before himself Christ as a teacher, or the life of Christ as an example, for Christ alone, he considered, can be made an object of worship, because

He combines all ideas of perfection in their just harmony. But to the end the battle was waged in his own heart. His own shortcomings were daily numbered up before the throne of grace. "But may He keep my heart tender," became a constant prayer as life drew to a close. And as large answers were vouchsafed to him, so the more his thirst after the things his nature felt the need of deepened and intensified itself.

His cry from first to last was, "Onwards." The keystone of his system—if one who was so divorced from all consideration of party can be said to have had a system—was the duty of development and progress. He laboured to carry to their highest perfection the powers with which his pupils were entrusted, in the hope that he was building a foundation which in active life would result in real blessing and helpfulness to others. He had no foolish fondness for old institutions or old forms, some of which he deemed unsuitable to the age, as they no longer had the spirit from which alone their life and value was derived. What was ancient and venerable had no charm for him as such. He delighted to look forward to the future, and his eminently constructive mind was full of novel schemes of usefulness, in which

he longed to fill even an humble part; while with natural modesty he was more anxious for the success of his views than for his own advancement. At one time he entertained thoughts of emigrating to Van Diemen's Land with his whole family, that he might assist in forming the moral and intellectual character of a new society. Such a place appeared to him to be the fairest field for the exhibition of active Christian energy. If he were made Bishop there he might build up a Christian church within a Christian state, and approximate to that lofty ideal of the inter-relations of secular and religious life which he dwelt on from time to time with peculiar emphasis. He yearned for that opportunity for Christian usefulness which some years later was granted to Bishop Selwyn.

From his fondness for history, political things had as great a reality to his mind as things of private life, and the life of a nation became as distinct as that of an individual. Hence it came to pass that while he laboured for the future he lived in the present. The thoughts, the influences, and the broad tendencies of his time were vividly before him. They meant more to him than to others, for they partook of that solemnity with which, in his judgment, as fraught with

ulterior consequences, every action was invested. At times his mind was much thrown off its balance by the state of public affairs. He was concerned by the distress and disaffection of the operative classes, and their condition haunted him day and night. He addressed a series of letters to the *Hertford Reformer*, to awaken the upper classes to the full extent of the evils which lay at the root of Chartism, and constituted at once its apology and its danger.

Above all, the condition of the Church almost filled him with despair. "When I think of the Church," he wrote in 1839, "I could sit down and pine and die." His belief that the evils he observed lay beyond the reach of any single measure, or the efforts of any individual, at times preyed upon him with an absorbing sadness. The years seemed to be written within and without with lamentation and mourning and woe. He became in danger of forgetting the manifold blessings of his domestic life. He felt bitterly his own powerlessness to apply a remedy to the disorders and errors which he so clearly distinguished. But he found relief in work and in prayer, and a solution for the intellectual difficulties in which his opinion of the social state of England involved

him, in the confident belief that Christ's kingdom was nigh at hand.

Arnold's residence was a small house at the Lakes. He had purchased it with a small estate in 1832, to provide himself with a retreat in case he retired from the school. It was here that his vacations were spent. His affections were knitted unto it with a great love, which deepened with the deepening of the years. The flat dull monotony of Warwickshire was odious to him—intolerable it would have been had his mind been less occupied ; but to Fox How, in the pauses of his work, he was irresistibly attracted. In all his wanderings at home and abroad, he clung to the belief that no scene on earth could be so beautiful as his mountain nest in the vale of the Rotha. With his keen enjoyment of beautiful scenery, it was much to him to have the mountains and streams and waving woods as familiar objects in connection with all the pleasures of the home circle. His life at Fox How was perfect rest. Not the rest of idleness or carelessness, but that higher rest which consists of the harmony of the passion for perfection and the longing for repose, for his need of rest never resulted in aimlessness and purposelessness of life. When he went apart from men

and men's haunts, it was not self-indulgence that he sought. He never could put off his linked union with the souls of others and all the mighty interests which belong to human beings and constitute the higher life of the world. But in the ceaseless activity of his mind, the pervading calm and rich beauty of the vales and hills touched him with a chastened joy; they spoke of quiet resting-places far from the noise and struggle of the world. In the soft stir of the streams, and in the loveliness of wild flowers, which he loved with a child's love, and shadows on the mountains blending in images of delight and suggesting pictures to his richly-furnished mind of other days, he had an earnest of that peace, the full contemplation of which, for its very glory, he felt would be too overwhelming. His noble passion for work kept his mind under sufficient control. He never stooped his manhood to the subjection of profitless dreaming, or indulged in sentiment for sentiment's sake.

Hence it came to pass that the association with the forms of beautiful objects never enervated him. It only served to stimulate him to practical life in the world, as he sat working or reading out in the midst of his family, "never raising his eyes to the

window without an influx of ever new delights ; ” or in their walks over the mountains or through the copses tempering lighter thoughts with wisdom, and gathering bright lessons, which the study of each new scene served to suggest and illustrate. It was in this quiet nook that he hoped to pass his declining days, and from beneath the shade of trees of his own planting, when his rough work was past, to send forth the results of his ripe experience, while the presence of pupils should still sustain his connection with the world and the onward march of mind ; till at the last, in his own words, “ his bones should go to Grasmere churchyard, to lie under the yews which Wordsworth planted, and to have the Rotha, with its deep and silent pools, passing by.”

VIII.

CHARLES WATERTON.

THREE miles south of Wakefield lies the demesne of Walton Hall, as richly diversified with wood and water as any in Yorkshire.

At no great distance stand the ruins of Sandal Castle, memorable for the great battle fought beneath its walls, where Queen Margaret, “she-wolf of France,” crowned with a paper diadem the noble head of York in mockery of his claims; and where the little Earl of Rutland was stabbed to the heart in his tender youth, for which act “the Lord Clyfford was accompted a tyraunt, and no gentleman; for the propertie of the lyon, which is a furious and an unreasonable beaste, is to be cruell to them that withstande hym, and gentle to such as prostrate or humiliate them selves before him.”

But the interest which attaches to the place we speak of is not derived from historic sources. We only ask our readers to go back a very few years, and come and see the park with us as it lies in the

soft silence of a summer's day, The demesne is especially remarkable for the air of seclusion and peace that pervades it. No gun is ever heard in the woods, and, for six months in the year, no boat is allowed to cross the lake; it is the home of liberty and peace to all the feathered kinds. The air vibrates with gay notes of birds as they fly about in merry flocks, many familiar to us all, but others strange of form, lured hither by tales of the welcome given to all comers. Here the glossy kingfisher wends its way through the grey rushes; there the shy lizard suns its little self upon the grass, or rolls its lithe body into a ball, startled at the fall of a leaf. A toad next greets us, flopping along the gravelled path; its jewelled eyes glitter, for it is here in especial favour.

Farther on, by the borders of a lake, stand a fantastic group of herons, each poised on one leg, each still as a stone, their heads tucked under their feathers. Passing along into the wood, we came upon a cluster of hollow tree trunks, over which an artificial awning is constructed to preserve from storm and wet the birds which gather here in hatching-time; and such a spirit of sociability is engendered by these pleasant arrangements, that

sometimes the barn owl, the jackdaw, and the redstart, are found dwelling together in perfect amity. In the heart of the wood a grotto has been hewn out of the rock, bearing on its summit a pillared temple, while beneath flows a river, the haunt of hundreds of waterfowl. Hard by, a clump of spruce fir trees, cut down to the height of seven or eight feet, their boughs gracefully entwined into a thick canopy, afford within their dusky walls a safe retreat to a whole world of little creatures. In another part of the grounds "a motherly humanity" has surrendered an ivy-clad ruin to the use of birds which love such an abode; and for their greater accommodation has erected, besides, a stone tower provided with ledgers, cells, and opes, for nests; nor is there wanting a green pleasaunce, enclosed by a stout yew fence, where the feathered inhabitants of the castle may strut and stroll at their leisure.

But who or what is this that now meets our eye? A figure of singular aspect, with giant limbs and spare body, "as if the upper part of Tithonus had been placed on the lower part of Ajax;" his face is of a chestnut hue, furrowed and tanned by exposure in torrid zones; his hair, cropped close to his head, is grisly grey; his eyes

flash with intelligence and latent humour; his long arms sway to and fro; his garments are of no fashionable cut, but made so as to give room for the full play of his muscular limbs, in achieving such feats as leaping fences and hopping on the brink of precipices; a brown jacket without skirts, its pockets stuffed with dainties for his feathered favourites, is buttoned across a somewhat defective chest; a hat covers his head, in compliment to social usage—an empty compliment, the hat is so shockingly bad.

Something has pleased him; he kicks off his slipper-like shoe, and runs forward to catch it as it falls, his face beaming with pleasure. And now something catches his eye: he darts up a tree with monkey-like agility, and stands upon the upper branches without fear of falling, an exploit not to be despised in a man eighty-one years old.

And this is Mr. Waterton, the owner of Walton Hall, the renowned naturalist, the traveller in British Guiana; a man of amazing activity and life. Unable in his youth to bear the dull, ordinary routine of English conventionalities, he roamed through the wildest parts of South America's equatorial region with the courage of a

lion, the trained instincts of a savage, the accurate observation of a man of science, and the rich delight of a poet.

Mr. Waterton belonged to an ancient Roman Catholic family, which had lived at Walton Hall for centuries. His ancestors fought at Cressy, Agincourt, and Marston Moor. Sir Robert Waterton was Governor of Pontefract Castle when the kingly captive lay there pining to death. Sir Hugh Waterton was in such favour as to be appointed his sovereign's executor, and guardian to his daughters.

One of his ancestors was commissioned to contract a royal marriage, being allowed thirteen shillings a day for his trouble and travelling expenses. Another was Lord Chancellor of England, and preferred the loss of his head to the sacrifice of his conscience. The last public commission held by the family was in the reign of Queen Mary, when the Watertons enjoyed once more the sunshine of the royal countenance.

Charles Waterton, the subject of this sketch, was born in 1782. At nine years of age he was sent to school in the North of England, where he made little progress in learning, but great proficiency in the art of bird-nesting. On his return home, his

ruling passion well-nigh brought him to an early grave. One night Monsieur Raquedal, the family chaplain, heard an unusual noise in an adjoining room, and, rushing in, was just in time to save the boy, who, in his sleep, had risen from his bed, and was opening the sash of a window three storeys from the ground, to step forth on his way to a neighbouring wood in search of a crow's nest he had marked during the day.

We can imagine the restless activity of such a nature as Waterton's, scenting, with the naturalness of a young savage, a freer, fuller life than he could find in his father's park; and yet, with that simplicity and loving reverence he ever showed to his parents, unwilling to leave home without some good reason.

It came at last. His father had purchased property in Demerara for his younger children, and Waterton eagerly begged to be allowed to go out and superintend it. He sailed on November 29, 1804, and landed at Staebrook (now called Georgetown), the capital of Demerara, the central province in the colony of British Guiana. It lies between Berbice and Essequibo, and these three provinces are called after the three great rivers of the country.

Mr. Waterton spent some time in Staebrock, learning the Spanish language, and examining the fowl which congregate on the sea-shore and in the fresh-water swamps behind the plantations. He felt convinced that personal observation was the only means of giving a truthful delineation of Nature, and in his travels constantly set before himself these three objects: "1. The discovery of habits hitherto unrecorded. 2. The verification of those generally admitted. 3. The refutation of those existing only on hearsay."

It was not until 1812 that his travels commenced. His whole soul had been excited by what he had seen in his short excursions into the interior, and the knowledge he had then acquired only deepened his thirst for more. His account of these journeys, jotted down in pleasant, pithy phrase, was afterwards published in a charming volume, with the title, "Waterton's Wanderings." The style is simple, but the information it yields on the animal and vegetable life of these remote regions is most abundant and instructive. We follow the enterprising traveller with lively interest as he roams far and wide through the intricacies of the forest, plunging fearlessly into its cool depths, where, from the entangled undergrowth, rise, in wayward

grace, plants that climb the rough tree stems, shaking out, high in air, a flowery crown of delicate blossoms.

The lustrous forms of tropical birds flashing through the embroidery of the trees—scarlet cotingas, toucans, the green houtou, and the flaming ara—fascinated his fancy, and their vivid tints seemed to him to surpass the glory of precious stones.

Strange noises, too, strike upon his ear. A sudden hammering resounds through the woods: it is the beautiful woodpecker, the kind physician of the trees; one sharp blow of its beak is sufficient to show whether the tree is sound, for it never wounds a healthy frame; but where the sap is tainted by disease, there it applies its pointed bill, and destroys the pernicious insects that are preying within.

As the evening deepens into night, from the inmost recesses of the forest is heard the sweet, pure note of the snow-white campanero, tolling like the faery bell in Hans Andersen's tale, ever luring onward the enchanted traveller. But space would fail to speak of one half the charming sights and sounds which Mr. Waterton so graphically descants on in his "Wanderings." With indo-

mitable spirit he grappled with the difficulties and privations he encountered ; barefoot and alone, or accompanied by "Daddy Quashi," his faithful negro, he "pulled poisonous snakes out of their lurking places ; climbed up trees to peep into holes for bats and vampires ; pursued the wild beasts over hill and dale ; rode on the back of a cayman ; slew a modern python ; and now, scorched by the noonday sun, and drenched by the pelting shower," he has returned to his hammock, "with but a poor supper to satisfy the cravings of hunger."

Thus he spent twenty years of his life, returning home at various intervals, and bringing with him hundreds of specimens of birds, and beasts, and insects.

Mr. Waterton's first journey was principally to collect some quantity of the strongest Wourali poison. The existence of this poison, known under so many names, has often been doubted ; yet we have facts relative to its extraordinary effects attested by Raleigh and Humboldt ; and it is used by all the South American savages between the Amazons and the Orinoco.

Waterton penetrated to the Macoushi country, where the Indians are most famous for their skill in its preparation. It is formed from a vine called

Wourali, from which the name is derived ; a root of a bitter taste ; two kinds of bulbous plants containing a green and glutinous juice ; two species of ants, one large and black, the other red ; a quantity of Indian pepper, and the pounded fangs of the Labarri and Counacouchi snakes. These ingredients are bruised together, and boiled till they are reduced to a thick syrup of a deep brown colour. The making of this poison is considered a gloomy, mysterious operation, during which the women and children are sent away, lest the evil spirit should harm them. The Indians dip their arrows into the poison, and, however small the wound inflicted, death must ensue ; the slightest puncture which admits this terrible juice under the cuticle is sufficient to cause death ; it is immediately taken into the blood, paralysing the nerves and organs of the body, yet it is supposed to be harmless if received into the stomach. Waterton tried the effects of the Wourali poison upon a number of birds and animals, and with similar results in each case ; no pain seemed to be felt, nor any local discomfort, but an overpowering sleepiness gradually overtakes the victim, and in a few minutes it dies without a groan. A strange experiment was made on an ass : it died, as the bystanders thought, in ten

minutes. An opening was then made in its wind-pipe, and through it the lungs were regularly inflated for two hours with a pair of bellows : suspended animation returned, but sank again ; then the artificial breathing was resumed and continued for two hours more, till, at last, the ass rose, and began to walk about (she did not, however, completely recover for a year) : henceforth she was known as Wouralia, and in the pleasant enclosures of Walton Park became “fat and frisky,” living for four-and-twenty years after.

This operation led many persons to think that persons poisoned by opium could be resuscitated by artificial respiration, continued until the lungs resumed their natural action. It also occurred to Professor Sewell that this Wourali poison might be applied, with great hope of success, to a patient labouring under hydrophobia ; but we have never heard whether the experiment has been tried.

The “green mantle” on the stagnant pools in the forests of Guiana, the intense light and humid heat of the tropics transmuting decay into richer growth, were not always conducive to health ; but Mr. Waterton had an infallible remedy. Whenever he felt aguish or feverish, he opened a vein, and took away about two-and-twenty ounces of

blood: this operation always made him feel quite comfortable. He was thoroughly convinced that "inflammation was at the root of all disease." O thrice happy mortal, to have reduced all the intricacies of pathology to one simple nostrum! What a cry of antisanguineous rage would the doctors of our day awake against a man who confessed that he had "blooded himself one hundred and ten times," administering as accompaniments jalap and calomel, and "potations of Peruvian bark"! But perhaps his physical constitution was as peculiar as his mode of living. For thirty years he had not slept in a bed; his pillow was a hollowed-out beech-wood block; he reserved for shipboard the luxury of the "velvet cushion," which was nothing else than the outer soles of his strong shoes, furnished with rough nails, on which he daintily reposed his cheek. An old cloak and napless blanket were all he allowed himself as covering; and yet he was morbidly sensitive to cold, and kept huge fires blazing all through the summer at the Hall. He rose every morning at half-past three o'clock, summer and winter; he totally abstained from wine or spirituous liquor, and to this cause he attributes his vigorous state of health when he was sixty years of age. Many in-

stances of his amazing courage and strength are recorded. In one of his visits to Rome he met an old friend, Captain Jones, who must have been a man of like spirit with himself. Together they mounted to the top of St. Peter's, ascended the cross, and then climbed thirteen feet higher, till they reached the summit of the lightning conductor; leaving their gloves on its point, they came down, and entering the castle of St. Angelo, they contrived to climb to the head of the guardian angel, where they stood for some moments on one leg.

We hear of Mr. Waterton again in the Zoological Gardens in London, bent on examining the hand and teeth of an ourang-outan which had been brought from Borneo. He enters the cage, and the two animals hug each other. The man examines the hand and puts his finger between the teeth of the beast, which, on his part, lovingly paws his visitor's face, and kisses him on the cheek. But one of the most signal instances of his presence of mind took place at a meeting of scientific gentlemen in Leeds, who had assembled to test the effects of the poison of serpents. A case full of these venomous reptiles had been provided, and a rabbit, as usual, was the victim; but

who was to be the executioner? Mr. Waterton immediately offered his services, and, requesting the bystanders not to move, he very quietly, but firmly, inserted his hand into the case of serpents, and, grasping one of them by the throat, drew it out and applied it to the rabbit; in replacing it, another snake obtruded itself half out of the box, to the great horror of the bystanders, who at once made for the door. Dr. Hobson (the friend and biographer of Waterton) pressed the lid down on the reptile, and Mr. Waterton, fearlessly seizing it by the neck, gently returned it to its place.

“In 1829,” he says (and this is the only allusion to his marriage we have in his Autobiography), “I became the happiest man in the world; but it pleased Heaven to convince me that all felicity here below is no more than a mere illusive, transitory dream; and I bow submissive to its adorable decrees. I am left with one fine little boy, who looks up to me for light, and I trust that I shall succeed in imparting it to him.”

But we must now return to the Hall, which at that time was the repository of the fruits of Mr. Waterton's elaborate toil of mind and body. The house is a noble pile of building, standing on an island in the midst of a beautiful sheet of water; a

light cast-iron bridge serves for an approach from the mainland. At the windows of his drawing-room the naturalist often sat, watching, with the aid of a powerful telescope, the movements of the countless birds which, in undisturbed freedom, floated on the waters of the lake, or roamed and flew by its banks. Throughout the grounds he had erected many other posts of observation, where, sitting in silence, he scrutinised all operations of nature which came within his ken.

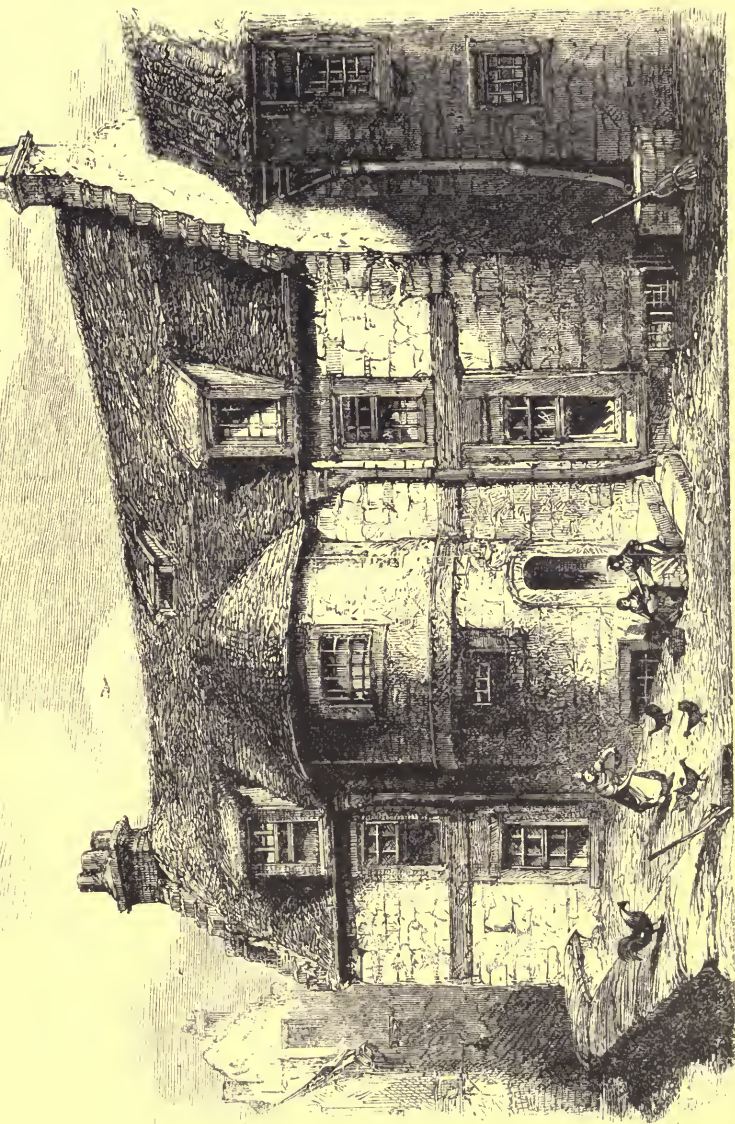
The specimens he had brought with him from his Western journeys were all stuffed by his own hands, chiefly in the early morning hours, before his eight o'clock breakfast. He had invented a new mode of taxidermy, of which he was very proud, regarding it as an "aristocratic" accomplishment. The rules of his art he very willingly imparted to any earnest enquirer; but ignorant pretensions or empty curiosity he met with frigid hauteur or severe rebuke. The most minute details of his method are given at the end of his book "The Wanderings." Along the centre of the wide staircase of the Hall these specimens were ranged in rich and varied succession, leading up to a large room in the topmost storey which was the chief chamber of the museum. Amongst other

wonders stood the memorable cayman, ten feet long, on whose back Mr. Waterton had ridden in triumph as it was drawn out of the water, making a bridle of its fore-legs. His humour found play in forming various nondescripts to which he affixed the names of what he disliked most, whether politically or religiously. The whole of this collection passed, by will, to the Roman Catholic institution at Ushaw. What a contrast this museum must have presented to our great national collection! Under the skilful hand of the naturalist the birds retain their grace of poise, their brilliant beauty, their type as revealed by some arrested movement which seems but a pause in life; but, alas! we cannot detect any characteristic attitude in the dried, shrunken forms, with tarnished colours, that are packed in gloomy cases lining the walls of our British Museum.

Mr. Waterton passed away in a good old age, and was buried in a mausoleum at the end of a little bend of the lake: a sombre spot overshadowed by ancient trees.

Our illustration is a happy representation of the love of the man for daring adventure. Unable, even at home, to live without physical excitement, he used to dash off to the Scarborough cliffs, and

have himself lowered by a rope over their face to hunt for eggs and to observe the birds at home. Provided with a long stick to ward himself from the rocks, he swung in the air, at the end of his rope, with as much ease and with twice the enjoyment with which he sat in his chair in his study. In these things was his life : his simple heart was at home in the uncivilised and lonely spots of nature ; his love of freedom found its best solace in the midst of the unchartered liberties of the forest and the coast. Temperate, hardy, brave, true to himself and true to his friends, he lived, among the tame civilities of Yorkshire, the simple life of an American pioneer, dignified by the pursuits and rendered noble by the ardour of a faithful naturalist.



BIRTH-PLACE OF DAVID ROBERTS.

IX.

DAVID ROBERTS.

THE Art of Painting owes a great debt to the discovery of steam locomotion. Before Stephenson and Fulton arose to revolutionise travel and to rescue the larger portion of our population from imprisonment by the seas, few except the wealthier class ever left the cliffs of England to rove about the world. Those who did confined themselves chiefly to the two or three years' route of the Grand Tour. They did not go to observe nature, or even to admire art, but to fit themselves to be statesmen, or to complete their education as gentlemen. When an artist travelled, he never thought of seeking subjects for landscape-painting in the mountain-valleys of Switzerland, or the lakes of Italy. He went to study the great pictures of the foremost Italians, and to discover the secrets of their mode of work. He went to form himself upon the first models, and to adopt a master among the dead. It was rarely that he escaped from this with his originality unimpaired.

A few, like Reynolds, had so much native fire within them that it survived all the copying and study of the past; but even he used to spend hours in scraping off layer after layer of the colours of a fine Titian, in order to discover the mystery of Titian's golden glow—of that inward depth of light, which, flowing up through all the surface colour, makes one imagine that the great Venetian painted on a canvas shot with threads of shimmering fire. In this way Reynolds was guilty of two sins: he ruined two or three fine Titians, for which, were not his own works so magnificent, we should feel inclined to boil over with indignation; and he spent his life in making experiments in the *wrong* way upon vehicles for colour. Had he set earnestly to work for himself in the same way as Titian did to discover the method of permanent painting, he would have succeeded; he sacrificed, on the contrary, his pictures to effect, and his native intelligence to imitation. It is true that he kept his originality; he only failed in producing pictures which should last like Titian's. But the generality who went to Italy lost all their instinctive power, and became bad copyists. It was different when cheap travelling began. Artists who had not been brought up

in the conventional schools, and who shared in the new impulse of the last half-century towards the development of individuality independent of the past, went abroad, not to look at the works of dead painters, but at the works of the living God. The distinctly Landscape school had begun; men spent their time upon the mountain side more than in the studio—rocking in a gondola upon the golden lagoons of Venice more than in its Accademia—by the stone pines and on the desolate Campagna of Rome more than in the Vatican. The enjoyment of pure landscape which Scott expressed in its most distinct and unmixed form in poetry, had reached the art of the pencil and the brush.

Wilkie was not a landscape painter, but he was the first to set an example of earnest travel for the sake of enlarging the sphere of art in new and unbroken scenes. His voyages through Spain and the East gave a spur to imitation, and before long Europe was filled with travelling artists, who lived from hand to mouth in village inns, health and natural pleasures making the commonest fare delightful—the evening devoted to the arrangement of sketches made during the day, on the glacier, by the torrent, where the boat lay drawn up on the

silver beach of the blue lake, where the spreading walnut-tree shadowed the lawny grass on which the knapsack was laid, and the midday meal of the wanderer taken.

This is the source of our landscape school. David Roberts represents one particular phase of it. He gave his heart more to "towered cities" and "antique towers" than to mountain, vale, and wood. Without being an architect, or, indeed, knowing anything of practical architecture, he painted buildings, pyramids, mosques, cathedrals, tombs, town-halls, wharves—all his life long, and in every country in Europe. Asia and Africa saw also this indefatigable wanderer roving up the Nile—penetrating to Palmyra, seated on the fragments which still tell where the churches of the Apocalypse once flourished and fell. He worked with the happiness of a healthy, pleasant-hearted man; he worked with the rapidity and ease of a man of great talent; he worked with the industry and incessancy of a man of genius. Genius, in highest sense, he had not a grain of, for he was never creative: not his the "shaping spirit of imagination," nor that eloquence of the brush which speaks like passion to the heart. At the same time he was not a mere photographer in art.

He did not draw things as the sun draws them, line for line. He was more accurate, in one way at least—he knew how to paint shadows, and the sun cannot do that on glass. Moreover, he was an artist in this—that he sometimes painted his impression. If he saw St. Paul's shining in a brilliant summer morning over the Thames, he painted the glorious sight his soul saw, and refused to see the dingy wharves beneath; in fact he did *not* see them. But we are sorry to say that he was seldom carried into this higher region. His world was a middle one. He was not accurate enough in his work to be of much service to the antiquarian, the architect, or the historian. His artist-quality made him reject what was ugly, and alter what was common. He was not inaccurate enough to what lay before him to reach that loftier accuracy which is true to the whole impression of a building and to the nature of its builders, while it is careless about fidelity to unimportant details. He never shocked, but he never astonished; he never displeased, but he never enchanted; he never distressed the eye, but he never moved the heart. He painted perceptions—not conceptions; he had sight, but not insight. The massive grandeur of Egypt's history does not excite him as

he sketches Thebes. The sorrowful beauty of Venice does not touch him as he outlines the Rialto. A scene-painter in his youth, he was a scene-painter at his heart all his life.

One may test the greatness of an artist by his love of colour. If he has a heart which glows with feeling, he cannot help striving to make the canvas glow. It was with truth to a necessity in all poetic natures that the mediævals made the colours represent passions. White was purity—sometimes faith and joy. As connected with the man—in dress—it was integrity, as, for example, in a judge—or humility, as in a rich man ; as connected with a woman, chastity.

Red in its good sense was the fire of Divine or pure love, as Dante makes his Charity come sweeping through Paradise in a ruddy glow of flame ; in a bad sense, it was the hatred which is only quenched by blood.

Blue signifies truth, as connected with the “terrible sapphire” of the firmament—the constancy of truth in human love, the purity and brightness of Divine truth. Yellow, the sunlight colour, is the gold of God’s goodness, or the gold of man’s fidelity : in a bad sense, probably from its connection with the colour of flames of hell, it

is inconstancy, deceit, or jealousy; the two former marking the sin which the mediæval thought the basest and the darkest, as in Dante, where the last circle of hell is given to the treacherous—the latter, jealousy, from its physical effects upon the face.

Green, the colour of the spring, is the colour of hope—hope for happiness in life, hope for immortality—a hope which passed on into victory; for the triumphant warrior or saint has green about him in dress or landscape, since the palm and the laurel are of the emerald.

Violet told of the passion of the martyr for truth, of the passion of the penitence which springs from love; while grey, the tint of ashes, spoke of mourning, humility, and was the garment of innocence unjustly treated or falsely accused.

As long as men painted from the heart, they loved and honoured colour; but when the Renaissance came, it froze the rainbow fountain; and from the latter pictures of Raphael down to the dead inanities of Guido, colour, having been like the dying dolphin, is like the dolphin dead.

David Roberts had no passion, no fire in his art. A low stone-colour is the prevailing tint of all his sketches—of many of his pictures. One

would not know an Eastern sky from a Thames sky on his canvas. The burning dazzle of the Oriental noon—the evanescent tenderness of the afterglow, when the sunken sun sends up for a swift ten minutes a pulsating tide of golden mist over the corn-fields of the Nile, were alike unnoted and unloved. The less brilliant but more varied hues which slumber and dance and ripple around the rainbow city of the Adriatic, making it and its lagoons an opal of which the city is the fiery heart, had no worship from David Roberts. Morning and evening they were spread before him, but he could not see them. We look at York Cathedral, we look at St. Mark's, in his pictures. The same sky arches over both; the same tint serves for the sandstone of the one and the alabaster of the other. It is as if he were always painting the drop scenes of the theatre—always bound to that conventional yellow, stony tone in which these interesting curtains are set forth to bear the glare of the foot-lights. But there is one class of pictures in which Roberts is gorgeous, and it is a curious instance of the theatrical nature of his art, and how the scene-painting clung to him to the end. When he gets into the interior of Milan or Burgos Cathedral on a grand ceremonial day, he is at home, for he is

looking on a sight which he might have used for the finale of a spectacular drama. Banners, and properties, and wax-lights, and gilded ornaments, and pillars draped in scarlet, and blue mist of incense and splendid robes—these things and their colours are seen and painted by him who could not see the amethyst of the sea or the conflagration of the sunset.

He was born at Stockbridge, near Edinburgh, October 24, 1796, among the artisan class. He received a Scotch education—that is to say, a good one—and began life very early as apprentice to a house-painter and decorator. For seven years he served in this trade, learning much which was of use to him afterwards; the rapid and effective execution which produces great effects with little trouble—the mechanical appliances which shorten labour, great readiness of hand, and a simple and matter-of-fact mode of using his pigments, which he retained during life.

He was now nineteen, with a soul above decoration. It was the artist's chaplet he sought, not the house-painter's paper crown. Throwing aside his seven years' work, and leaving the dull world of trade, he began his career as an artist by entering as a scene-painter into the magic world of the

theatre. Some strolling players were passing through Carlisle; Roberts offered them his services: they were accepted. He knew exactly what to do, and he did it rapidly; his success was sufficient to give him impulse; and in 1820 he was scene-painter at the Glasgow and Edinburgh theatres—in 1822 first scene-painter at Drury Lane. His swiftness of execution, and his power of inventing the sort of landscape required for the theatre, delighted the managers. Roberts could always be depended on at a push; and when Charles Mathews's "At Home" was suddenly brought out, the painter was ready at a short notice with the clever scenes which harmonised so well with the actor's happy impersonations. But as he had aspired from decorating to scene-painting, so now he resolved to win reputation as an oil-painter. He had received scarcely any technical education in schools of art; he had only remained a week under the teaching of Andrew Wilson, President of the Trustees' "Academy" in Edinburgh; but he launched forth at once into this new channel in the river of art, with characteristic faith in himself. He first appeared in London on the walls of the Society of British Artists in Suffolk-street, and the three views he sent initiated at once his artistic

career, and the branch of it to which he devoted his life. They were "Dryburgh Abbey," and the "East Front" and "South Transept" of Melrose. In the same year, 1824, he wandered over the Channel to Dieppe, Havre, and Rouen, and brought back pictures of the lovely churches of Normandy. Next year he exhibited his first work at the Royal Academy, "A View of Rouen Cathedral," and for seven years more continued his contributions to the young society in Suffolk-street, of which he was President. But aspiring to be a Royal Academician, partly because of the greater prestige connected with that title, he dissolved his connection with the society, and became an Associate in 1838, and a full Academician in 1841. We have already mentioned his unwearied travelling. Before 1838, France, Spain, Germany, Belgium, Holland, and Morocco had filled his sketch-book with their buildings; from 1838 to 1848 the East claimed his energy, and Egypt and Syria were translated into colour for the English public. We know from the best of his pictures that he watched the sunrise smite upon the mighty statue of the vocal Memnon; that he saw the stormy volume of the Nile rush by the solemn ruins of Philæ; that he stood within the Titanic portal of the temple of

Dendera, in Upper Egypt: that he watched the last rays of the declining sun tinge with scarlet and fire the sky-cleaving point of the "Pyramids of Ghizeh." He stood among the pilgrims who thronged the "Greek Church of the Holy Nativity at Bethlehem," and looked from the green summit of the "Mount of Olives," across the profound valley of the Kedron, upon "Jerusalem, with the pilgrims returning" through its gates; and later still, imagined upon canvas that supreme day of a nation's sorrow when the Holy City fell before the force of Imperial Rome. For the next ten years, he roved over Italy; and Venice, Rome, Pisa, and Milan were sketched and painted with a facile and unwearied pencil. The antique and passionate charm of Rome, the exquisite sadness of Venice, the mediæval tenderness of Pisa, never seem to have touched his heart; but all their buildings are scenically, and with picturesque neatness, conventionalised upon the canvas. He is more at home in Milan. Here the Cathedral was a work after his own heart. It looks like a theatre cathedral within and without, and Roberts painted it with all the heart he had. But when he found himself in the sombre massiveness of the vestibule of San Ambrogio, whence St. Ambrose repulsed Theodo-

sius till he had cleansed his hands from blood, his inspiration deserted him—he could not realise or feel the past.

It was now 1860, and age had begun “to claw him in its clutch ;” in the way of travelling he had scarcely any other worlds left to conquer. We cannot say that “his heart untravelled fondly turned to home ;” but he certainly began to paint the Thames. Mr. Lucas, one of the celebrated contractors for the Exhibition building at South Kensington, gave him an order for a series of pictures—“London from the River Thames.” No Embankment had as yet destroyed the dirty but picturesque wharves, the quaint ins and outs of the river among sheds and piles ; but David Roberts could not see the interest of these things—he hid them by the sails of vessels or omitted them altogether. What charmed him was the river front of the New Palace at Westminster ; the stately lines of Somerset House, relieved by the broken lines of the ground and buildings of the Temple ; the towering of the harmonious dome and golden cross of St. Paul’s ; but, more especially, that ineffably glorious sight, seldom vouchsafed to man, yet when vouchsafed an epoch in life, “the Embarkation of the Lord Mayor from Blackfriars Bridge.” To

realise this on canvas is too much to demand from any man; but when that man is old, even to attempt it is likely to be fatal. It was death to lift the dazzling veil of Isis—it was apoplexy to approach with a rash pencil the Olympian spectacle of the Lord Mayor's show. David Roberts was painting one of this series of the Thames in the morning of November 25, 1864. In the afternoon he was seized with a fit in the street. Carried home, he never recovered speech or consciousness, and died as the winter evening fell.

He had realised a considerable fortune. His sketchy and picturesque style lent itself easily to publication. He was lithographed, chromolithographed, engraved on wood and steel, sent abroad to the public in many shapes. His "Picturesque Sketches in Spain," his "Sketches in the Holy Land and Syria," his "Italy, Classical, Historical, and Picturesque," were works which sold well, and bear a good price now. When, after his death, the contents of his studio were brought to the hammer, his coloured sketches, six or seven hundred in number, were bought with eagerness, and fetched sums which astonished those who justly estimated David Roberts's position in the scale of Art. It is true they were simple and large in

treatment, but they were neither realistic nor imaginative. It is true the colour was agreeable to the eye, but it was always the same, till at last one was angry with the monotonous iteration of a few tints, and those tints too cool for the giving of continuous pleasure. When the Alhambra at Granada, the mosque of Cairo, the Campanile of Florence, and the gateway of Lambeth Palace, are all painted in the same stone colour, and are looked down upon from the same placidly-tinted sky, it is a little too much. His figures and groups of figures are well introduced, and with a cleverness which leads the eye up to the main subject, the eye of the composition; but, as Mr. Redgrave says, "it must be confessed that they remind us somewhat of stage supernumeraries and green-room properties."

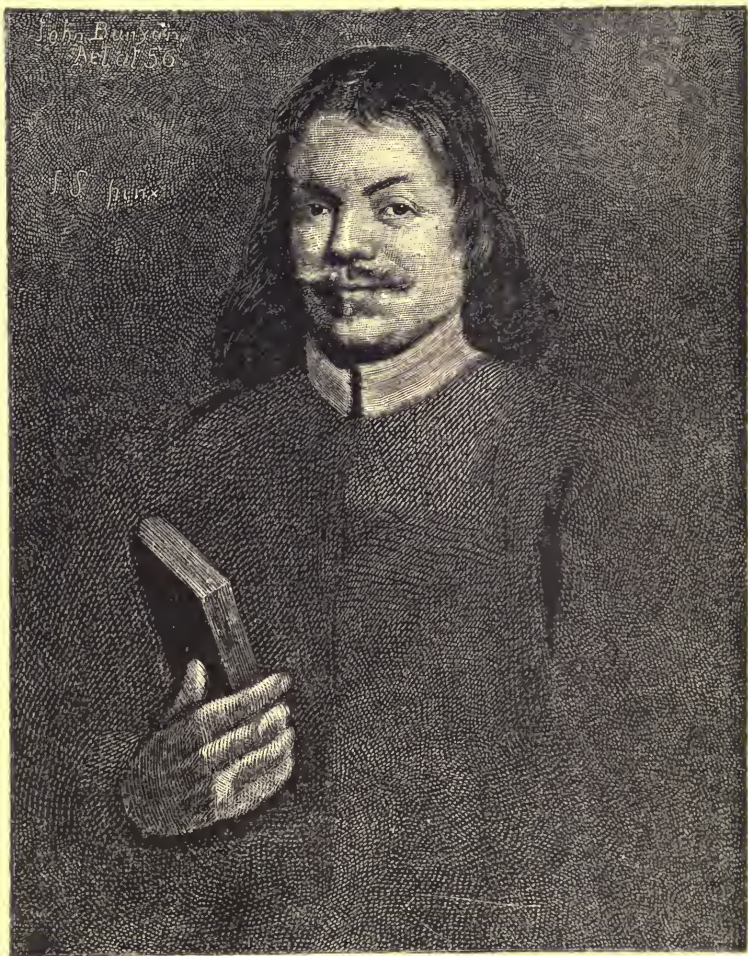
On the whole he was not a great artist, but in the style he chose he was always equal, always pleasant. He never aspired—his latest sketch and his earliest sketch seem scarcely different in ability; but if he never aspired, he never degenerated. He knew what he could do, and he always did it; and that is no small praise, even though his doing was never great. He was a man of

talent—he was not a man of genius. But the world understands talent more than genius, and thousands admired Roberts who prated abuse of Turner. It is no small advantage, in a worldly sense, to be a man of moderate ability, for then one does not offend the *great ungifted*. A curious instance of this is that the general public, and even his brother artists, deferred to Roberts as a judge of architecture. He had painted architecture all his life in a pleasant, indifferent manner; the world credited him with so much practical knowledge of it that he was placed upon committees as a judge of designs for public buildings. But it is the testimony of one who knew both him and his works, that “his real knowledge of architecture was, at the best, only that of an architectural draughtsman, while of the science of that art, of fitness or constructive utility, he was wholly ignorant.”

The clearness and undisturbed tone of his pictures were reflected in the cheerfulness and charming geniality of his character. His face wore, in mirth, a natural and sunny smile, and his conversation was full of a quiet, unobtrusive humour. He had the continuous gaiety of a man

incapable of profound thought or profound feeling, but capable of living happily with himself and easily with others. With excellent health, with honourable success in the world, leading the most delightful of lives and the most free, he was surrounded by troops of friends and blessed by family affection. But his affection was not selfishly isolated within his own circle, nor were his opinions narrowed. His generosity was largely given to his brethren of the pencil, and every benevolent scheme for the encouragement of struggling artists was supported with an ungrudging hand. His liberality was as large as his industry; no bigotry or Pharisaism stained his kindness. He had seen too much of the world to be narrow-minded. Simple, gentle, kindly-hearted to the last, he died with his powers unimpaired and his wonderful energy unlessened by disease. Death was kind to him, and took him in a moment. It is as sad as it is curious to turn for an instant and compare his life with that of his contemporary, Turner; the man of mere talent with the man of genius; the man up to the common level of his time, with the man who rose level after level above it; the man whose ordinary gifts made him many friends, with

the man whose extraordinary powers made him solitary—solitary in life, solitary in death. But it is no use chafing against the eyelessness of the present world. It will always be a half-blind beetle; it will always worship its Roberts and despise its Turner.



JOHN BUNYAN.

X.

BUNYAN.

THERE is a peculiar interest in dwelling on the lives of great men, arising not only from the emotions which the consideration of their various characters awakes in us, but from the pleasure we find in tracing the influence they possessed over the age in which they lived, and the causes and circumstances which produced or favoured that influence. And yet this does not constitute the whole of the interest. Every great man is more or less the offspring of the time in which he appears; he bears stamped on his character the marks of the ebb and flow of the tide he watches—it may be impressions of its fury or of its quietude. Thus when, wearied with the contemplation of governments and systems, we turn our attention to the life of some great man, we find in him the chronicle as well as the lesson of his own times. The history of the past would be to us but a weary reiteration of the rise and fall of kingdoms, the winnings and the losings in the great game of

empires, if through it all one did not find the touch of some human hand or the influence of some human heart. And if, in the onward press of events, one loses for a moment sight of individuals, it is only that we may recognise them in the aggregate, and see those principles and motives which we may have noted in the few believed and acted on by the many. Thus we need never miss in the history of the past that charm of human interest and sympathy which binds us to the present.

In looking back on bygone times, one is struck by what we may call the strange inconsistency of society, which at one time produced group after group of remarkable men, and then gave birth to comparatively few of any note. But of this we may be certain, that when a nation is passing through any great change, whether it be through a revolution or through the gradual coming to maturity of a series of ideas, the number of great men which start into being is as numerous as the time demands, and often more so. Perhaps there is no period in the history of our country which shows us this more forcibly than the reign of Charles I. It was then that the very groundwork of the English character was tested, and its many-sided nature came to light in the

persons of those who combated on the side of a threatening parliament or grouped themselves round a domineering king. The former exhibited all the noble independence and dogged determination which have ever distinguished the English race; the latter represented something of that chivalrous spirit which had not yet died out of Europe, and which clung to the unfortunate Charles when the power he believed to be inviolable was waning fast, and was soon to be extinguished on the scaffold.

Although the subject of this paper cannot be classed amongst the notable men of his day, yet he bears a name which has acquired a popularity and influence rarely attained by any; and whilst other celebrities of fame and worth are forgotten, or only known to the student of history, the name of Bunyan has become a household word. But he had little to do with the troubles of the nation. Although he was nursed amid the lowerings of the storm, and his youth must have been spent when it was all abroad, it was not the actual tempest which struck him—for that had fallen into a lull during his manhood—but rather the return wave which broke over him, as it did over many others at the Restoration.

John Bunyan was borne in 1628, in the village of Elstow, about a mile from Bedford. A tinker, and the son of a tinker, he was only notable in the neighbourhood by the profanity of his language and his godless mode of life. To his gay and thoughtless companions he must have seemed a pleasant fellow: passionately fond of dancing, bell-ringing, and all athletic sports, he entered into them with all the vigour and wild energy of his nature, and used to delight especially in "solacing himself" with them on the Sabbath day. However, he was not without many stirrings of conscience and sundry dreams of coming judgment and endless perdition. Driven by poverty or restlessness, he entered the army at an early age, and became one of Cromwell's soldiers, exhibiting in that strict and fanatical camp the same reckless character which had singled him out as the plague of his own village. We are not told if he took part in the fatal battle of Naseby, from which Charles fled in a state of almost utter hopelessness; but he was present at the siege of Leicester, which took place immediately afterwards. It was here that his life was preserved in a singular way. A fellow-soldier, desiring to change places with him for a time, took his post

as sentinel, and was shot dead whilst performing this duty. This did not fail to make a lasting impression on the mind of Bunyan.

He left the army soon after, and through the influence of his wife's dowry, which consisted of two works of a religious character, he became a somewhat altered man. He went to church twice a-day, and felt an overwhelming reverence for everything connected with its services—so much so that he declares he “could have laid down at the feet of the priest and have been trampled upon by him : his name, garb, and work did so intoxicate and bewitch him.” Hearing the minister one Sunday proclaim the sin of Sabbath-breaking, his conscience was stirred within him, and he became impressed with the idea that the sermon was for him; but the same afternoon he returned with avidity to his usual sports. It was then that he received one of those visions which by their frequent repetition afterwards so influenced his character and his life, and led him to give us the history of his “Pilgrim” in the form of a dream. We relate it in his own words :—

“The same day, as I was in the midst of a game of *cat*, and having struck it one blow from the hole, just as I was about to strike it the second

time, a voice did suddenly dart from heaven into my soul, which said, 'Wilt thou leave thy sins and go to heaven, or have thy sins and go to hell?' At this I was put to an exceeding amaze; wherefore, leaving my cat upon the ground, I looked up to heaven, and was as if I had, with the eyes of my understanding, seen the Lord Jesus looking down upon me, as being very hotly displeased with me, and as if He did very severely threaten me with some grievous punishment for these and other ungodly practices." This voice, this vision, was as real to him as anything seen with the naked eye, but the effect it had upon him was to fill him with despair. "This conclusion was fastened on my spirit—that I had been a great and grievous sinner, and that it was now too late for me to look after heaven. For, thought I, if the case be thus, my state is surely miserable—miserable if I leave my sins, and but miserable if I follow them." And so he returned desperately to his sport again: persuaded that he could never attain to righteousness, he plunged more than ever into all the delights of existence, till one day he received a reproof from a godless woman, at whose shop-window he was "cursing and swearing and playing

the madman," as was his wont. She told him that he was "the ungodliest fellow for swearing that she ever heard in all her life, and that by thus doing he was able to spoil all the youth in the town if they came but in his company." This reprimand had more effect upon him than if it had come from a better person, and he made a vigorous effort to get rid of his profane habits; in doing which he was successful. He says: "How it came to pass I know not; I did from this time forward so leave my swearing, that it was a great wonder to myself to observe it; and whereas before I knew not how to speak unless I put an oath before and another behind, to make my words have authority, now I could without it speak better and with more pleasantness than ever I could before." Thus he triumphed over the only actual vice to which he was addicted; for though he speaks of himself as if he had been the greatest of sinners, yet he never fell into any other outward sin than that of an utterly thoughtless, vain mode of life, into which the wildness and buoyancy of his spirits constantly precipitated him. In after years, when adversity had sobered him, and he had learnt something of the Christian life, he magnified the offences of his youth in contrasting them with his

reformed condition, retaining always a horror of those excesses in which he had once indulged.

About this time he became acquainted with a poor but Christian man, who persuaded him to read the Bible and take a pleasure therein. He studied it with delight, especially the historical books ; but as yet the Epistles were incomprehensible to him, and, to use his own forcible expression, he says, “I could not away with them.” However, such was the change in his conduct that all his companions remarked it, and he became conscious that he was an object of admiration and wonder. He gave up his pursuit of bell-ringing and dancing, thinking that such pleasures were not compatible with religion ; and he thought that “he pleased God as well as any man in England.” But this self-complacency was soon to receive a shock. While busy tinkering one day in the town of Bedford, he overheard the conversation of a few poor women who, seated at their cottage-doors, were talking of the goodness of God, their own miserable state by nature, and the saving power of Christ. He listened in astonishment ; such feelings of self-abasement and heavenly comfort were utterly strange to him ; he went on his way pondering over what he had heard, and

unable to banish from his mind the doubts which arose as to his spiritual state, or to answer the misgivings which suddenly crowded in upon him as he thought over the poor women whom he had just left seated in the sunshine. He came to the conclusion that he had been nothing better than a hypocrite, and that he wanted "the true tokens of a godly man." He went to those poor people who had first led him to suspect himself, and seized every opportunity of being in their company. Their conversation and Christian experience taught him much, and he so profited by his intercourse with them that a new light was thrown over the Bible and its precepts, those portions of it which had been unintelligible to him before becoming his chief source of pleasure and delight.

We now come to a period in the life of Bunyan in which the light of true religion strove with the ignorance and blindness that were in him. The battle was long and agonising; temptations assailed him at every step, and no sooner had one trouble fled than another equally terrible overtook him. We must not pass by with careless indifference these passages in his life, or class them amongst the ravings of a madman; for it is to them we owe some of the most powerful and

telling scenes depicted in the "Pilgrim's Progress"—scenes which in all times have won the interest and the sympathy of mankind, not only because of the imaginative power with which they are drawn, but because of the reality which surrounds them, and their appeal to the experience of all those acquainted with the Christian course. As his way to peace lay through protracted and dismal conflicts, his power of conception transformed the workings of his mind into dreams and visions, which seemed to be sent either to condemn or console him. Thus, shortly after his meeting with the good people of Bedford, he had what he calls a "kind of vision about them," which he relates thus in his own words:—

"I saw as if they were on the sunny side of some high mountain, there refreshing themselves with the pleasant beams of the sun, while I was shivering and shrinking in the cold, afflicted with frost, snow, and dark clouds; methought also, betwixt me and them, I saw a wall that did compass about this mountain. Now through this wall my soul did greatly desire to pass, concluding that, if I could, I would even go in the very midst of them, and there also comfort myself with the heat of their sun. About this wall I thought my-

self to go again and again, still prying as I went, to see if I could find some way or passage by which I might enter therein; but none could I find for some time. At the last I saw as it were a narrow gap, like a little doorway, in the wall, through which I attempted to pass. I made many offers to get in, but all in vain. At last, with great striving, methought I at first did get in my head, and after that my whole body. Then was I exceedingly glad, went and sat down in the midst of them, and so was comforted with the light and heat of their sun." This vision and all it taught him dwelt long upon his mind; he thought of it constantly during his occupation or when wandering through the fields, and it awakened in him a renewed earnestness to know more of the heavenly life. Still, his temptations rather increased than diminished, and we may judge of their intensity by his comparing himself to the possessed child whom they brought to Jesus that He might heal him. He had many doubts as to his "election," and the uselessness of any endeavour on his part unless he were a "chosen vessel:" the thought was full of trouble, and it brought another with it—that perhaps the good people of Bedford (like the chosen few who escaped from Sodom and Gomorrah) had been singled out

as those who were to be saved alone, and his repentance was too late. In the bitterness of his soul he cried out, "O that I had turned seven years ago! to think that I should trifle away my time, till my soul and heaven were lost!"

About this time he became acquainted with Mr. Gifford, the Baptist minister, who admitted him into his congregation, and the society of those good people who composed it. Their conversation distressed more than comforted him. Despair of attaining to the same assurance of faith they spoke of, plunged him into fresh misery, and he fell deep into the "Slough of Despond;" "putting forth inexpressible groanings"—yet he was not without some consolation; he speaks of certain Scripture promises coming forcible to his mind, as "hints, touches, and short visits: very sweet when present, but they lasted not." On reading a volume of Luther's "Commentary on the Galatians," he became strengthened, and somewhat comforted to find that he was not the only one who had experienced the buffetings of the Devil.

But a new and strange trial was in store for him, and one which lasted a year. He was haunted by the thought that he must "sell Christ;" he shuddered at the words which seemed to be spoken

in the deep of his heart, and repeated there with a horrid perseverance. "Sell Him! Sell Him!" shrieked his adversary in his ear. "No; not for thousands and thousands of worlds," he vehemently answered. Yet, in spite of his protestations, the temptation went on from time to time; till at last one morning as he lay upon his bed, when assailed as usual by his tormentor, the thought came, "Let Him go, if He will." And he imagined that he had given his consent. "Oh!" he exclaims, "the diligence of Satan! Now was the battle won; and down fell I, as a bird that is shot from the top of a tree, into great guilt and fearful despair." The story of Esau flashed across his mind, and to his wounded spirit there seemed no place of repentance, though he sought it carefully and with tears. The conviction of the great evil he had committed weighed heavily upon him; and if any comforting thought of God's mercy came into his soul, it was banished by the remembrance of Judas, and the fate of Judas, with whose crime he classed his own offence. Still he wrestled with his despair, and strove to pray, desiring the little congregation of which he was a member to implore the mercy of God on his behalf.

But another source of distress came upon him in

the supposition that he had committed the sin against the Holy Ghost. "The Tempter," he says, "provoked me to desire that sin. I was as if I could not, must not, be quiet until I had committed it. And in so strong a measure was this temptation upon me, that I have been ready to clap my hands under my chin to hold my mouth from opening." In connection with this terrible thought, a strange "preternatural impression," as he called it, came to him. It happened that once, as he was walking to and fro in the shop of a neighbour, bemoaning his sad state, and grieving at the wickedness of his heart—"praying also that if this sin of mine did differ from that against the Holy Ghost, the Lord would show it to me; and being ready to sink with fear—suddenly there was as if there had rushed in at the window the noise of wind upon me, very pleasant, and as if I heard a voice speaking, 'Didst ever refuse to be justified by the blood of Christ?' And withal my whole life of profession past was in a moment opened to me : wherein I was made to see that I had not ; so my heart answered, groaningly, 'No.' Then fell the Word of God upon me with power, 'See that ye refuse not Him that speaketh.' This made a strange seizure on my spirit ; it brought light with it, and

commanded a silence in my heart. It showed me also that Jesus Christ had yet a word of mercy for me. But as to my determining about this strange dispensation, what it was, I know not; or from whence it came, I know not. But verily that sudden rushing wind was as if an angel had come upon me, and it commanded a great calm in my soul."

It must be remembered that Bunyan could not have been altogether uninfluenced by the state of religious thought into which the nation had been thrown at the termination of the Civil War.

As long as Charles ruled his subjects, Episcopacy flourished; indeed, it acquired a splendour and dominion during the supremacy of Laud which seemed to render it secure from the murmurings and discontents of the people. But the height to which it had attained only rendered its fall the more deplorable. During the residence of Charles at Oxford, its services were performed with regal pomp. But it was unhappily no longer the dominant Church of the nation, and it already bore stamped upon it the doom of its temporary suppression.

In 1644, Laud, who had lain three years in prison, was dragged, old and helpless, before his

judges, and condemned to die. A year before the death of that prelate, the House of Commons and the Westminster Divines met together, and with all solemn protestations and oaths renounced for ever the Church which had been established by the Reformers: they swore as representatives of the people to accept and maintain the Covenant. The same oath was taken by the House of Lords a few weeks after. The consequence of this act was, that the Liturgy of the Church of England was abolished, and the Directory established in its stead. It was to this form of worship that Bunyan professed so overweening an attachment on his first attendance at church. As the causes of the war were both political and religious, one finds these two elements much mingled during its course. Indeed it was this union which gave peculiar horror to the combat; for men (whether Royalist or Roundhead) were not only fighting for their liberty, but also for their freedom of conscience.

The various religious opinions of the victorious party, which had been kept somewhat in check during the progress of hostilities, developed into a hydra-headed monster at their close. The number of sects at this period is almost incredible. Opi-

nions, however extravagant and visionary, took free root amongst a people who had seen the fall of the Constitution as well as the church, and were ready to embrace any strange notions which enthusiasts or fanatics imposed upon them. The state of religious thought was strung to the highest pitch, and rendered nervous through the tension which it underwent; consequently, the belief in Divine impressions, supernatural calls, visions, and dreams became prevalent and popular. We have seen this somewhat exemplified in the case of Bunyan; for though there is no doubt that much was owing to his strong and untutored imagination, which would have been excited with the fervour of his religious feelings in whatever age he might have lived, yet much was caused by the atmosphere round him and the temper of the times. Ideas of the direct manifestation of the Divine will were all abroad; and as each party believed that they were the favoured recipients of it, the pulpits rang with the praises of the rival sects. Amongst all this tumult of thought there appeared a solitary youth, who had spent much of his time in wandering from town to town, and in meditation amongst the hills of Derbyshire. It was George Fox, the founder of Quakerism. Endued with a grave and

sensitive mind, he saw with distress the various factions which rent religion, and the dissensions which drove pious men to dwell more upon the mode of worship than the worship itself. He sought for satisfaction or comfort, but found it not: sometimes he went to various ministers for help, but oftener he read his Bible in lonely places. At last he heard a voice which told him that "Christ alone could speak to his condition." Overwhelmed by the revelation, he studied the Bible with increased ardour, till he became convinced that as God is a Spirit, so He demands a spiritual worship, and all forms or ceremonies are nothing more than impediments to a pure worship, and a blight upon true religion. "God is a Spirit!" was the watchword with which Fox drew around him a band of followers, who eagerly embraced his doctrines and defended his cause. In spite of persecution and wrong, they have laid their impress on mankind, which remains even to this day.

We have spoken of a few of those mental conflicts which Bunyan fought on the lonely battlefield of his own soul, and which continued to harass him (with but short intervals of repose) during the lapse of two years. He read the Bible with intense earnestness, as the only refuge for

his wounded spirit, and thus acquired that wide knowledge of it which he shows in all his works. When he at length emerged from the Valley of the Shadow of Death, the effect of returning hope and light so filled him with wonder and joy that he could hardly realise that the grace of God had really reached him ; but as his fetters fell from off him, one by one, he rejoiced in that hope he had despaired of realising.

In 1655 Gifford died ; and Bunyan, who had been publicly baptised in the river Ouse, was appointed one of those whose duty it was to address the gathered congregation : he says : “ I was led to see that the Holy Ghost never intended that men who have gifts and abilities should bury them in the earth, but rather did command and stir up such to the exercise of their gift, and also did commend those that were apt and ready to do so.” However illiterate these discourses may have been, they were full of the eloquence of earnestness and the experience of a tried spirit. Bunyan preached what he felt, and wove into his subject some of the deep lessons he had learnt on the way to assurance and quietude : having suffered much, he was the more capable of extending a strong and ready hand of help to those who needed it. So efficient did he

prove in this capacity, that, by the desire of the congregation, he was "solemnly set apart, with much prayer and fasting, for the public ministry of the Word."

He used also to wander from village to village and gather the poor around him, in order to teach them ; for, in spite of the religious tendency of the age, they were very ignorant. His great desire was, he says, "to get into the darkest places of the country: yet not because I could not endure the light, but because I found my spirit leaned most after awakening and converting work." One of the cottages he used to frequent is still shown in a hamlet not many miles from Bedford ; it is approached by a small wicket-gate, and the room in which his hearers assembled is large and airy. As the fireplace is set deep within the wall, there is plenty of room beneath the shadow of the great chimney and under the broad wing of the mantelpiece for many seats. It was here, with his chair pushed right into the corner, that Bunyan sat and spoke of the one subject which filled his mind.

But his ministry was soon to cease. In 1660 the Monarchy was restored, and Charles II. was seated on the throne of England, amidst the ac-

clamations of the people. Such was the enthusiasm with which he was greeted, that, it is said, numbers fell dead in the streets for joy. In the fervour of their excitement they believed that the king was little less than divine. They had heard of his "resplendent virtues," his courage, his misfortunes, and also of his devotion to religion—on which point many fabulous stories had reached their ears. The hopes of the Puritans beat high, for Charles had taken the Covenant in Scotland; but they were doomed to be disappointed. A few months after the Restoration the Act of Uniformity was passed, and on the anniversary of St. Bartholomew's Day more than 2,000 Nonconforming ministers were ejected from their livings. The Presbyterians compared it to the massacre of the French Huguenots, and perhaps did not forget in their misery the sufferings of those Episcopal clergy who had been reduced to the same penury and want more than twenty years before. But the Presbyterians were not only those who suffered; all the meetings and conventicles of the Nonconformists were suppressed, and stigmatised as being both heretical and disloyal. Bunyan, who had many misgivings as to his personal safety, still persevered in his itinerant preaching, and in leading the worship of his little

congregation, nothing daunted by the peril he incurred. A warrant was issued against him, and shortly after he was arrested at a private house, at which he was holding a meeting. He had been aware of the danger that awaited him, but refused to forego the engagement, lest any timidity on his part should cause an "ill savour in the country." His accusation ran thus, that "John Bunyan, of the town of Bedford, had devilishly and perniciously abstained from coming to church, and was a common upholder of several unlawful meetings and conventicles."

Bunyan was a brave man. He did not fear to acknowledge that he had preached and prayed from house to house, the conviction that he had done good by so doing giving him new courage. He disputed every point brought against him by his judges with much ingenuity, and declared that he was not commanded to attend his parish church by the Word of God, nor to use the Book of Common Prayer, but rather to pray with the Spirit. He had no liking for our Liturgy, and had used his influence in persuading others not to conform to it. After some delay he was sentenced (more on his own confession than from any witnesses brought against him) to perpetual banishment. This judgment

was never put into execution, but he was forthwith imprisoned.

Shortly afterwards, Bunyan's wife (a second spouse), with her heart full of the wrong done to her husband, presented a petition to the House of Lords on his behalf; but this proving fruitless, she appealed to Sir Matthew Hale, a learned and good judge, who was charitably disposed towards the Nonconformists. He was touched by her poverty, her intrepid spirit, and the destitution of the four children, deprived of a father's support; but he told her that he could do her no good. "Will your husband leave preaching?" demanded Judge Twisden. "My lord," answered the indomitable woman, "he dares not leave preaching as long as he can speak."

For twelve years Bunyan was an inmate of Bedford Gaol, during which time he had sundry dismal warnings of ending his days on the gibbet. He was fortunate in having a gaoler who was well disposed towards him from the first. He was allowed to help in maintaining his family by making tagged bootlaces; and he enjoyed the society of those who were immured with him for the same cause as that which (in his own eyes) gave him a place amongst the martyrs. His gaoler

so far departed from prison routine as to allow him occasionally to visit his friends in the town, and even to preside at their meetings. The perfect faith which existed between the two may have been owing, in a measure, to a story which is related of his prison life. On being permitted to leave the gaol one day, he felt, as night came on, irresistibly impelled to return to it. The hour was late; the gates were closed; and Bunyan knocked in vain for admittance. At last he roused the drowsy keeper, who was much surprised and a little cross to find his prisoner so conscientious. But the impatience he felt in being disturbed out of his slumber was turned into thankfulness when, a short time after, a message came from a neighbouring magistrate, asking if the prisoner were safe; and the keeper was able to produce him. "You may go out now when you will," said the gaoler; "for you know better than I can tell you when to come in again."

But his enemies did not permit him to have this indulgence for long; and as his confinement became stricter, he employed himself in writing and reading. The only books he possessed were the "Book of Martyrs," by Foxe, and the Bible; but in these he found all his wants supplied. He says, "I had never in all my life so great an inlet into the Word

of God as now. Those Scriptures that I saw nothing in before are made, in this place and state, to shine upon me ; so that sometimes, when I have been in the savour of them, I have been able to laugh at destruction, and to fear neither the horse nor his rider."

At last, his long incarceration having won him pity, and the publication of his marvellous book brought him into notice, he obtained his full release. *We* cannot look with altogether disinterested eyes upon his long imprisonment, for it is to that dreary time that we owe the publication of that strange and wonderful dream which, altogether unlike the fabrication of an "airy nothing," is still the delight of both the ignorant and the learned.

It is often the case that, in the loneliness of adversity, men, when looking back upon the past, see it transformed into a pilgrimage—a weary one at most (for present sorrow casts a shadow over happier moments); and with the thought is often mingled an unreal view of life, its purpose and its end. This is true, in part, of Bunyan. In the solitude of his prison he reflected how like a pilgrimage had been his life hitherto; what enemies he had met, what difficulties he had overcome, what evils he had encountered on his way. But

his troubles had been too keenly felt, and the lessons they had taught him too fiercely graven upon his mind, for him ever to look upon them otherwise than as stern realities; and as such he wove them into the history of Christian, and made them known all over the world under the figurative terms of the "Slough of Despond," "Giant Despair," "Valley of the Shadow of Death," and many more. As a work of genius the "Pilgrim's Progress" ranks high; it has the power of enchanting the imagination, as well as teaching the heart. From the very first our sympathies are with the burdened citizen of the City of Destruction, and we follow him with unabated interest till he is received by the Shining Ones into the Celestial City. The story is told with a simplicity and vigour of language which, in place of offending, charms us. Each character is so well sustained, and falls so deftly into its place, that nothing (not even the terrible fight with Apollyon) destroys the gravity and onward movement of the dream. Children read it with delight, for, though they may not penetrate into its deeper meaning, it presents picture after picture to their minds; and in after life it is prized, not only for its beauty of design, but also for the spiritual truth it contains and the

knowledge of the human heart it depicts. Perhaps there is no book which has had so wide a circulation or been so eagerly read by all, for it has been translated into most European languages, and introduced even into Roman Catholic libraries—only in the latter case “Giant Pope” is expunged.

The “Holy War” is not less worthy of our attention. Bunyan had not served in the army for nothing; throughout the work he shows himself acquainted with the tactics as well as the arms used in warfare. There is great beauty and faithfulness of detail in the whole story, insomuch that, without losing that obscurity which is at once the nature and charm of allegory, the interpretation is easily supplied. Perhaps some of the attractiveness of this work consists in its appealing to so many of our feelings: we are touched by its solemnity and truth, charmed by its grace, and astonished by its pictorial power. We see here the same vivid imagination at work which we found in the “Pilgrim’s Progress;” but it is more redundant, and apt at times to degenerate into profuseness. Still, nothing can be more beautiful than the description of the Prince’s army, its captains, its standards, and their various devices; and afterwards the triumphant entry of Immanuel into the town

of Mansoul, dragging Diabolus at his chariot-wheels, at which the shout of "He hath led captivity captive" is echoed through the royal camp. This and similar portions of the work are full of poetical feeling, and they give us an insight into that deep religious peace which Bunyan possessed, and which he describes in language full of tenderness and grace.

But the fame of Bunyan rests undoubtedly on the "Pilgrim." Many of those who have never heard of the "Holy War" are acquainted with every incident in the journey of Christian. It is essentially the book of the people, and has been read and re-read till its shadowy personages have become as real and familiar as the celebrities of history. It also possesses the interest of having been written in prison, where Bunyan had no other resources to draw from than the treasures of his Bible, and the deep searchings of his own heart; but these were sufficient for him, and show to us that scholarship is not necessary for the adornment or setting forth of truth, since without it this book has won its way to the hearts of all; and who can tell the abiding and gracious influence it has exercised for the good of many?

Bunyan was a quick and voluminous writer. It has been said that his treatises were as numerous as

his years. Many of them contain notes of his sermons, written after they were preached, and many of them are controversial; in this field he shows himself both sturdy and sagacious, and a formidable antagonist.

His "Grace Abounding" is a strange and remarkable account of his own life, in which he rather magnifies than conceals the errors of his youth. It was written under strong religious excitement, and one must not attribute too much reality to his self-reproach.

The remaining sixteen years of his life were prosperous. His popularity as a preacher widened rapidly. Crowds filled his chapel in Bedford, and on his visits to London to deliver his week-day addresses, numbers thronged to hear him, the celebrated Dr. Owen amongst them. There is a story told which so thoroughly shows the man, that we must admit it here.

One day, when he had "preached with peculiar warmth and enlargement," some of his friends came to shake hands with him, and thank him for his discourse, observing what a "sweet sermon" he had given them. "Ay," he replied, "you need not remind me of that; for the Devil told me of it before I was out of the pulpit."

Bunyan did not live to see the revolution which overthrew the Stuart dynasty in this country, and the Toleration Act which followed it. His last illness proceeded from a severe cold, caught in performing a kindly mission of intercession on behalf of a youth who had offended his father. On returning home he was seized with a fever, the consequence of exposure to a drenching rain; it completely prostrated him, and he never recovered. He died at the house of his friend Mr. Strudwick, a grocer, in the year 1688, and at the age of sixty. His last words were full of Christian hope and calm assurance.

His tomb may still be seen in Bunhill Fields burying-ground, where he was interred; and graven on it is the following epitaph:—

“The Pilgrim’s Progress now is finished.
And Death has laid him in his earthly bed.”

THE END.

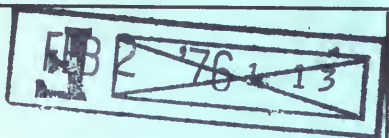
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